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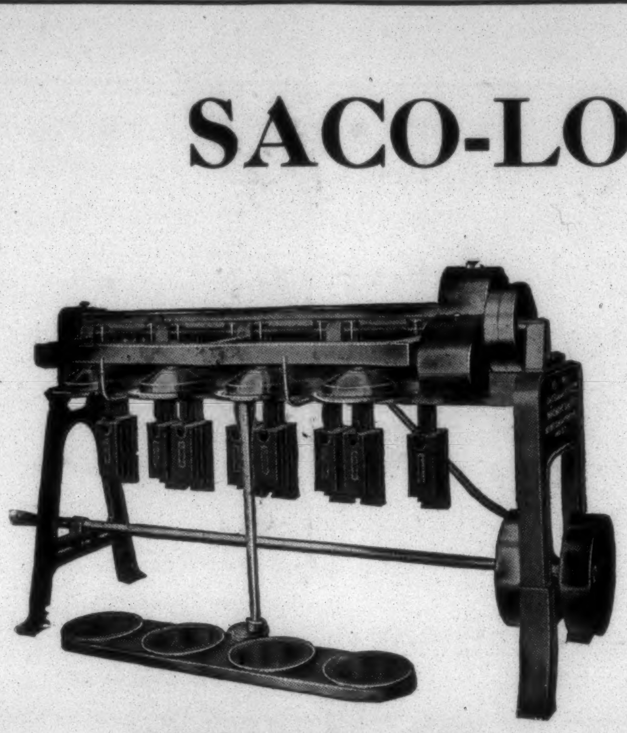
SOUTHERN TEXTILE BULLETIN

VOL. XXIII. CHARLOTTE, N. C., THURSDAY, APRIL 13, 1922. NUMBER 7.

SACO-LOWELL SHOPS



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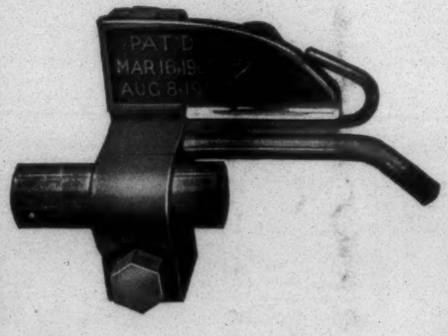

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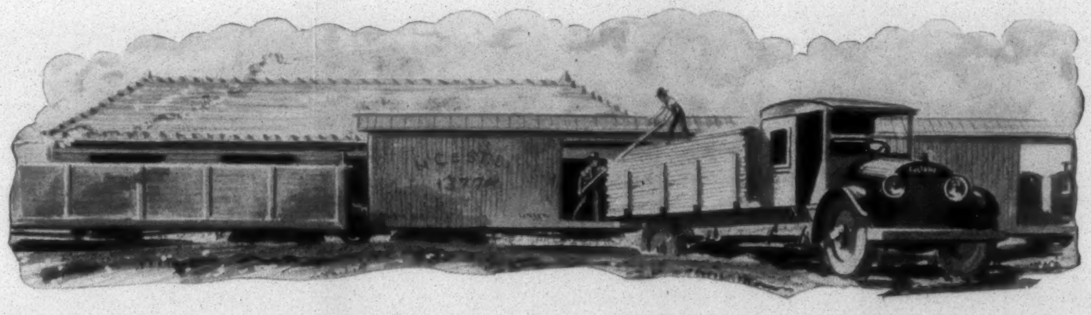

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SOUTHERN
TEXTILE BULLETIN

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VOL. XXIII. CHARLOTTE, N. C., THURSDAY, APRIL 13, 1922. NUMBER 7

Need of Greater Fibre Knowledge

James McDowell, of the Sharp Manufacturing Company, New Bedford, Mass., in a lecture at the Lowell Textile School, Lowell, Mass., stressed the importance of a wider knowledge of textiles fibres, declaring that many mill men are woefully ignorant of the character of cotton fibres, the various grades and other factors determining the quality of raw material used. The selection of the right kind of cotton, he stated, is one of the most important phases of mill operation. His remarks, in part, are given below:

"For a long period the basic types of textile machinery have been unchanged, and it may be centuries before some mechanical genius introduces fundamental changes. Today anyone having the money to pay the bill can build a cotton mill that will differ in no fundamental structural or mechanical detail from competing mills. The standards for building and equipment of a cotton mill can be duplicated almost anywhere, but this is not true of management and labor. The latter, and the various functions performed by them, are the greatest variable elements in manufacturing, and it is largely because of these variations in ability and efficiency that mills succeed or fail.

"Equally as great a variation is to be found in the ability and efficiency of superintendents and overseers. A nice balance between technical knowledge, practical experience and ability to handle help is necessary to make an efficient superintendent or overseer, and the relative success of various mills depends largely on the training, personal character and enthusiasm of these individuals and their assistants.

"Quite as much variation as exists between the labor and management of various mills will be found in their executives, particularly in the latter's financing, buying and marketing ability. While skillful financing is necessary, there is little question but that the success of more mills may be traced to able buying and marketing than to any other factor.

"I believe it is safe to assert that, as a class, cotton manufacturers know less about modern methods of salesmanship, styling and balancing distribution against production than the executives of many other industries not nearly so important. We are still marketing the bulk of our production by methods established 50 years ago, and one of the great changes that may be expected in the future will be the development of marketing systems more in keeping with the times. It is not my purpose, however, to discuss these phases of the subject, but to concentrate attention upon the proper method of buying and selecting cotton.

"Our great engineering schools have developed elaborate laboratories for testing all forms of raw material. This is one of the most important phases in the training of young engineers. In our textile schools we have no special training schools for cotton selection and buying. Cotton is still selected by trial and error tests, often by individuals with only a narrow training confined to a single mill, and seldom with the background of sufficient training in laboratories to teach them the importance of microscopic investigation.

"The character of cloth or yarn is determined fundamentally by the character, type, grade, length, fineness and twist of the cotton used. It is obviously true that a good mill can make a better yarn out of poor cotton than a poor mill can make out of a good cotton. Executive, ability, management and labor being approximately the same, then the kind of cotton selected will determine the success or failure of a mill organization.

"The problem of the cotton experts is not solved when he selects types of cotton that will spin into a certain grade and length of yarn. He must select the grade of cotton that will give him the results desired and give them to him at the lowest possible cost. Roughly speaking, about 150 types of American cottons may be found in the market today. That is, a buyer can go into the market and buy 150 bales of cotton in a single day each of which would be of a different commercial character.

"Let us assume, for the sake of argument, that a cotton buyer did this and kept a careful record of each plantation from which each bale of cotton came. If he repeated this experiment the following year he might find a 75 per cent variation. In other words, cotton from the same plantation, from the same fields, grown from the same seeds, and cultivated by the same men will, in two years' time, show a 75 per cent variation either up or down. Too much rain in one section, too little fertilizer, certain differences in ginning conditions, and the usual variations in soil and climate affect cotton in a widely varying degree. The cotton fiber, is the most inconsistent of all raw materials and will probably remain so for many years. We must, therefore, use the greatest care and give the most particular attention to all details so that, no matter how often types vary in the field or in the market, we shall always have the proper fiber in the mill.

"The three most important qualities of cotton are character, fineness and length. In the spinning of coarse yarns the most essential quality is good character; that is, a proper amount of twist, reasonable evenness of length and the elimination of immature and overripe fibres; the presence of immature and overripe fibers not only diminishes the strength of the yarn, but prevents it from bleaching, dyeing and printing evenly. Mistakes in cotton selection will find expression in seconds of yarn and fabric, as well as in excessive waste.

"You must remember that if you select too fine a grade, or pay too high a premium, you will make your goods too costly for profitable sale. The margin between what is right and what is wrong is very small and only extremely accurate judgment or test can start you right. The diameter and spirality, or twist, while of importance even in coarse yarns, are not so essential as the other elements. In fine count yarns we should give very careful considerations to the fineness, spirality and maturity of the cotton as well as to length. Spirality, or natural twist, increases in proportion to the fineness of the fiber. The strength of a yarn, therefore, is almost directly proportional with the number of fibers that can be incorporated in a cross section. The strength of the individual fibers bears little or no relationship to the strength of the yarn, for a yarn that is broken will show only from seven to ten per cent of broken fibers; these are the fibers that have carried the load, and the remainder simply slip on each other, their interlocking spirals failing to hold.

"Immature and overripe fibers aid this slipping and consequently diminish the strength of the yarn. Fully ripe, mature cotton is essential for proper dyeing and printing. Many evils are blamed on the dyer or dyemaker that are really due to carelessness or ignorance of the cotton buyer. Also many dyers and finishers spoil good cloth or yarn by not knowing their fibers and treating all fibres alike just as they did years ago, or, as they say, following the book.

"The common method of testing cotton is by the pulling of a handful of staple until there remains in the hand a small bunch of fibers that are well paralleled and that are of reasonable evenness. It is a good test and the proper basis for all future experiments. It is one of those apparently simple tests that require long experience, great skill and keen observation. The skilled pulling or stapling of cotton is quite as much of an art as is tea-testing. The stapling or pulling can be learned by watching any experienced classer or buyer. After the correct procedure has been acquired, it is advisable that the learner should obtain as large a variety of cotton types as possible, and, after making a series of pulls from each, compare them with the pulls of experienced cotton buyers.

"Practice often, noting the little details that are characteristic of certain lengths and grades, and keep a systematic record of your pulls to measure your gradually developing skill.

"Although some men seem to have an inherent aptitude for such work and will acquire the requisite skill much quicker than those lacking the natural ability, this does not excuse the mill technician from failing to familiarize himself with as many different grades and types of cotton as possible. After years of experience in studying the fiber in this manner it is possible for most men to acquire a very nice judgment as to its quality. They know its character by the way it feels between the fingers and by the way it pulls, and they can detect the presence of an undue proportion of overripe and immature fiber. They can tell its length within a fraction of an inch.

"When, however, it comes to the very fine points of cotton selection, the microscope is the only guide, and micro-photography is the only

(Continued on Page 27)

Preparing Cotton for Opening

Speaking before the Oldham Managers and Overlookers Society, at Oldham, Eng., W. Wilkinson, of Platt Bros and Company, discussed methods of preparing cotton for the carding process, stated that the opening and cleaning department should receive a great deal more attention than is usually given them.

Mr. Wilkinson said it was a subject of the greatest importance to all cotton spinners. It was quite clear to him that if the recapitalized mills were to make satisfactory profits the managements must not only think of cheapening the cost of production on the old orthodox lines, but their energies should be used to devising and obtaining means to open and clean the dirtiest and cheapest of cottons in such a way that a yarn might be made equal in quality to that of other countries from the high-priced clean cottons, and also to do that without increasing the cost of labor. He found that the spinning firms which were making profits today were those in which particular attention had been given during the past twelve months to increasing the opening and cleaning plant of their mixing and blowing rooms. If the matter was weighed up seriously as to the difference in cost between the best and the cheapest mixing and blowing room machinery it would be found that the difference was not excessive when they compared the few machines required and the very great importance of that, the first process in cotton spinning. Additional machines in an opener combination which did not increase the amount of labor required, but which gave improved results, were always worth adding. Further, there was no part of the spinning plant which was found better to keep up to date and in good working condition than the mixing and blowing machinery. The old cry of, "It has done before and must do again" did not pay today. If the spinning mill was to be worked profitably it must be worked economically, but great care had to be taken that they did not save the pence and lose the pounds.

Commenting upon the details of the work of opening and cleaning cotton, the lecturer remarked that in a concise form it was "as much opening as possible without injury to the fibres; as much cleaning as possible without curling or stringing them." Great strides had been made since the days when the bladed beater was the principal cleaning agency. It was still used today, but they now tried to get as much cleaning as possible done by combing lattices and cylinders before the cotton arrived at the beater, and in many cases, especially on long staple cottons, it was entirely done away with, and was substituted by cylinders with strikers which only struck the cotton once in one revolution and just covered the whole width of the machine in one revolution. It was quite plain, therefore, that they were now preparing cotton for the card with as little damage as they knew how. An important point which should be decided was "Shall we have stack mixings or not?" Stack mixings properly made, used at the right time, and pulled in a downward line from the top to the bottom, could not be detrimental but must be helpful both to carding and spinning, although in that district excellent results were being obtained up to about 44's counts American cotton under the system of making the laps direct from the bales. Direct feeding from the bales was the cheapest system, and was giving entire satisfaction to many spinners. Under that system ten bales should be in use at one time and ten more opened around the bale breaker, lifting and drying ready for use.

The hopper bale breaker required less skill in the feeding and reduced the amount of labor requried when compared with the old roller breaker. A falling motion with creeper lattice was now becoming more popular for the machine. The arrangement ensured that the hopper was kept evenly supplied with cotton, thus causing the action of the spiked lifting lattice and even roller to give a regular delivery and, what was more to the point, an even opening of the cotton in use. The patent hopper opener was put on the market during the war to deal with the hard-pressed American bale which had come to stay. The demand for it proved that it was a necessary machine. Its opening action was all of a combing process, and while it provided an additional hopper for mixing the cotton it was also an additional reserve box to prevent irregularity, as the whole arrangement of feed and delivery was automatic, being governed by the weighted swing doors in the hopper and in the hopper of the hopper feeder. The hopper feeder was introduced into Lancashire from America about 1892, and it had done more to decrease labor without in any way deteriorating the lap than any previous invention since the introduction of scutching machinery. Its outstanding features were its gentle treatment of the cotton and the increased regularity of lap sheet obtained by its use. It was also a good mixer of cottons, but it was not complete without an automatic filling arrangement which ensured about one-eighth of cotton in the box. Since the introduction of the patent hopper opener, the hopper feeder had become more than ever what it was originally intended for, and that was to give a regular delivery of cotton to the next machine, no matter whether it be a Buckley opener, the breaker scutcher, or the lattice feeder of the exhaust opener. The lattice feeder had undergone a great change during the last few months, its cleaning surface of grid bars having been increased to twice as much as formerly, the number of bars now in use in the patented arrangement being 76 as against 25 on the old pattern. The arrangement was entirely new, and patents had been applied for in several countries. To obtain that great cleaning surface Platts had arranged the delivery funnel over the feed lattice, and from the funnel the cotton might pass either to the Crighton cylinder part and the dust trunk or direct to the exhaust opener lap machine. The increase in the amount of droppings from the machine was from 100 to 150 per cent more than from the old, and it was so arranged that the air might enter between the spaces of a few of the top grid bars, leaving more than half the circumference of the cylinder of cleaning bars. On the lattice feeder the speed of the regulating cones should be about 1,000 revolutions per minute. It was very disappointing to him to go into mills and find the cone straps on the machines working much below the centre, for undoubtedly the best position was either in the centre or just above. To obtain the best regulated scutcher lap every attention should be paid to obtaining the best results in regularity from the opener.

The Crighton opener still held its own as one of the best single cleaning cylinders in use. Not only was it extensively used for short and medium counts, but as made by Platts it was now finding great favor on long staple Egyptian cottons when working in combination with their exhaust opener. In the construction of the cylinder for long staple cottons they had so arranged the plates and strikers as to get a regular delivery from the machine, and the speed of the cylinder was such as to open and clean the cotton without stringing it. The old idea that the longer the staple the slower the cylinder should be run was wrong because, as it was necessary to get the long Egyptian out quickly the cylinder must run at a fairly quick speed. The best speed for an average production was 700 to 750 revolutions per minute. The speed of the cylinder for American cotton when running in conjunction with their exhaust opener was 450 to 500 revolutions. The single Crighton opener was often used for short staple cottons, and it was often necessary to run the cylinder at 1,000 revolutions. In all cases the cylinder should be adjusted to the grid bars to suit the quality and weight of cotton passing through, and the number of grid bars might be either 148, 168 or 188, the number depending on the cotton in use and the quality of the droppings required. If the best results in cleaning were to be obtained care must be taken not to run the exhaust cylinder at a greater speed than was required to draw the cotton regularly from the lattice feeder through the Crighton cylinder part and across the dust trunk. When working a good quality of Egyptian cotton through such a combination of machines it was the best policy to dispense with the bladed beater and to substitute a cylinder with strikers.

Regarding the scutcher, the principal object should be to give a regular lap sheet, which could only be obtained from well opened cotton, good mechanical regulating, and a settling chamber and dust chimney, which would allow the air to be delivered from the fan as an easy regular force. He did not think it necessary to use intermediate scutchers with all the regulating machines now used in an opener combinations. The great fault in many blowing rooms since the shorter working hours came into force was the attempt to put too much weight through the finisher scutchers. He advised a production of about 200 pounds per hour, and at that weight he had every confidence in good results being obtained if the opener was doing its work satisfactorily. He thought they were all agreed the cleaner the lap the better also was the carding, as it reduced the tendency to fill the wire with impurities. A clean cardroom brought clean and efficient labor. He advised them to equip the rooms with the best carding engines because their competitors in the East were sparing no expense in equipping these parts of the mill.

Marked Increase in Foreign Consumption of Cotton.

While the pessimists are trying to convince us that there is no future for the textile industry and that Europe is sinking deeper into business depression, it would be well to stop long enough to note the fact that during the six months ending Jan. 31st, 1922, Great Britain, France, Germany and Italy consumed 511,000 more bales of cotton than during the previous six months and that there has been a marked increase since January 31st.

During the five years prior to the war it required an average of 14,200,000 bales of American cotton in order to clothe the world and some day we are coming back to that figure and eventually going above it.

On the first of each month we are one month further away from the war and one month further on the road to normalcy.

While the pessimists croak of hard times in Europe, she increases her consumption of cotton and is continuing to do so.

The world will not call for 14,200,000 bales of American cotton next year which is indeed fortunate because we must find a way to curb the boll weevil before we will again be able to meet that demand.

Some predict that the 1922 crop will sell at 10 cents while others say that the price will reach 25 cents and we know not which is right but unless the problem of the boll weevil is met the world will in a few years call for more cotton than we can supply.

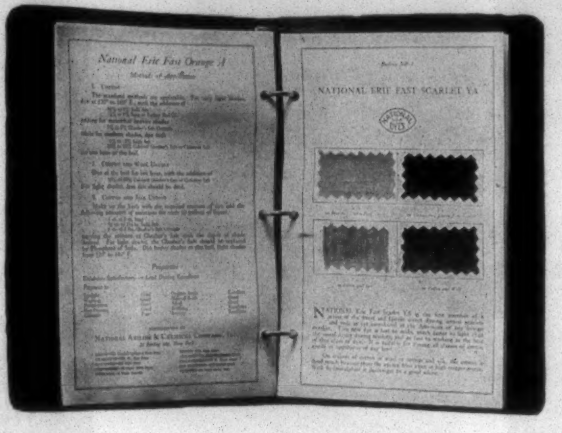
Texas can in favorable years beat the boll weevil by early planting and picking but the climate of Georgia, South Carolina and North Carolina does not give them any such opportunity and their situation is more serious than is generally recognized.

"National" News

OF INTEREST TO DYERS AND THE COLOR USING INDUSTRIES IN GENERAL

Prepared by the

NATIONAL ANILINE & CHEMICAL COMPANY, INC.



What Evidence of Progress Is Most Valuable to Dye Users?

Prompt Advice and Practical Information on the Character and Properties of the New Dyes.

New Dye Bulletins are a Feature of "National" Service

When a new dye is developed and released to the trade as an established "National" product a special bulletin is simultaneously issued. This places in the hands of the dyer a brief description of the color, illustrated by swatches showing several dyeings on appropriate fabrics, together with detailed and practical instructions as to the method of application; and a tabulation of the properties of the new dye based on laboratory tests.

The bulletins are issued in loose-leaf form to fit a special binder, for ready reference by the dyer. From time to time all the "National" products are incorporated in the standard color cards issued by the Company. But this important advance information is given to the trade through the prompt distribution of these New Dye Bulletins.

This is merely one item in the whole program of development and it is illustrative of the "National" idea of practical service based on an understanding of the dye user's requirements.

National

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RAPID FAST DYES FOR COTTON WHEN DIAZOTIZED AND DEVELOPED WITH

National Red Developer P
National Blue Developer D
National Scarlet Developer O

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Our House Organ "Dyestuffs"

This is a monthly digest of interesting and informative articles appearing in various domestic and foreign trade journals, of interest to the users of dyestuffs. An effort is made to give special, though not exclusive attention, to a specific subject, and among the more recent issues Silk, Jute and Linen have been specially treated, while the current number for March refers particularly to Sir William Henry Perkin, this being the month in which he was born, and in which also, he made his discovery of the first coal-tar color. Here for instance are the leading articles appearing in the last few issues of "Dyestuffs"—

NOVEMBER
History of Textiles in the New World (illustrated)
DECEMBER
Dyes and Wearing Apparel
JANUARY
An Old Chinese Story of the Origin of Silk (illustrated)
FEBRUARY
Jute Dyeing
Value and Balance in Color
MARCH
The Rapid Fast Dyestuffs
Dyeing Worsted Fabrics

Upon request we will be glad to send copies of "Dyestuffs" to those interested.

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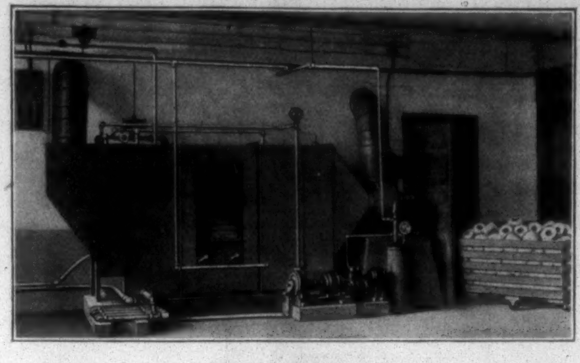
THE FIRST AND LARGEST MAKERS of COAL-TAR DYES IN AMERICA

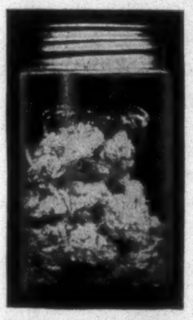
NATIONAL DYES

Yarn is stored and conditioned
for about 12 hours—
in the room on the other side of this partition



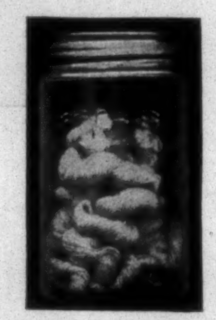
This apparatus heats the air very hot, produces a high humidity and circulates it in the conditioning room. The high heat softens the waxy constituent of the cotton. The humidity sets the twist. The rapid circulation of air eliminates free moisture.

Before



Reelings of Yarn taken direct from cone before conditioning.

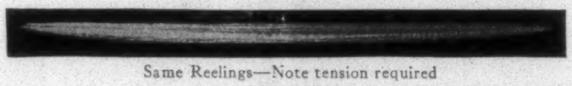
After



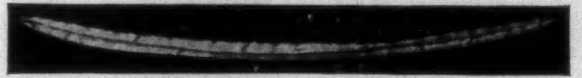
Reelings taken from same cone after treatment 12 hours 95° F 98° RH.

Conditioned Yarn

makes friends, whether you
use it yourself
or sell it



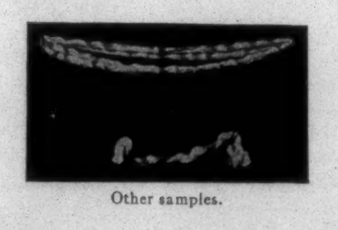
Same Reelings—Note tension required to eliminate kinks.



Conditioned—and twist stays but snarls and kinks go.

Other Samples

These photographs were made not by us but by a customer who had operated our conditioning apparatus for five months. They represent his actual and current practice on a production basis.



Other samples.

Textile mills producing sales yarn, especially hosiery yarns, knitting mills and hosiery mills find this apparatus particularly helpful.

There is more on this subject in our Bulletin 322

Parks-Cramer Company
Engineers & Contractors
Industrial Piping and Air Conditioning
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Is Reinforced Concrete Construction Best?

In studying the history of textile manufacture we cannot help but be impressed by the various different steps which have taken place in the evolution of the present mill buildings. These steps have been made concurrently with improvements and advances made in other directions.

In the early days of cotton manufacture the mills were located near the only available sources of power, namely, a stream of water. The mills were narrow and of low story heights and the windows were of small dimensions. This could not have been otherwise considering the fact that the textile machines were of limited dimensions, were partly manually operated and their output limited, says Howard E. Cousins in Builders.

A new era began with the introduction of steam as a source of power, making the choice of location more unlimited and a mill owner could locate his mill where labor was easily obtained.

Probably the three factors which had the most to do with the advancement of building construction were increased competition, better methods of building the various textile machines making them of sturdier construction and capable of running at higher speeds, and the production of more suitable materials for building such as wrought iron and rolled steel.

In the early 1800's experiments were made in England to determine the strength of cast iron girders. This gave an impetus to the use of this material for mill buildings. As a result of several failures this type of construction was short lived. Generally speaking the earlier types of mill buildings, both in this country and in England, were of very flimsy construction, the floors being made up of two layers of boarding supported on joists varying from 2 inches to 3 inches in thickness and spaced from 10 inches to 16 inches on centers. These joists were in turn supported by girders resting on wooden columns. Very often the under side of the joists was covered by plastering on wooden laths, making a hollow timber structure of a very inflammable nature.

The various improvements in textile machines induced both by competition and economic conditions resulted in the machines being built more sturdily and capable of running at higher speeds, and of very much larger dimensions. The buildings which housed them were correspondingly increased in size, the story heights became loftier and the windows of larger area, the heads of the windows being carried to the ceiling. Later the increased production of wrought iron followed by steel rolled beams placed in the hands of the constructor a new material which he was not slow in utilizing. Brick and iron have always been cheap in England whereas in this country timber has not only been cheap but more easily obtained and a design has been involved as slow burning mill construction. In this we have had the advantage of the investigations made by the Associated Factory Mutual Companies, who, through their inspection department, have collected innumerable facts relating to the design and construction of cotton mills.

The present type of mill most generally used, although not fireproof, has certain fire resisting qualities and is not easily destroyed. The timber which is used in this construction today is long leaf yellow pine, the better qualities of which are not only getting scarce but will increase in cost as the years go on. Other structural materials will soon, therefore, have to be relied upon.

Sand and gravel, materials used in reinforced concrete construction, are available in vast quantities in all parts of the country while cement is being manufactured in larger quantities each year. During the last few years many notable examples of reinforced concrete buildings have been built, practically all of which have been highly successful. This could not have been otherwise considering its many advantages.

The question of fireproof conditions is an important one and a most convincing argument for this construction can be made by making reference to two fires which occurred in the year 1914. In the Salem conflagration a reinforced concrete building was one of the two buildings remaining after the fire. This building, a storehouse of the Naumkeag Steam Cotton Company, was of concrete construction, walls, floor and roof. There were some small windows of wire glass in metal sash and these were protected on the inside by tin clad shutters provided with fusible links. Although this building was exposed to the full force of the fire not a sprinkler opened and the damage to the building and its contents was negligible. In the Edison fire occurring in the same year at West Orange, New Jersey, although the fire entirely destroyed all the brick and steel frame buildings, careful estimates made by engineers after the fire showed that 85 per cent of the concrete buildings were in good condition in spite of the intense heat occasioned by the highly inflammable nature of their contents.

Owners of industrial plants throughout the country are beginning to recognize the merits of reinforced concrete construction and regulations for its proper use are published in the building codes of all the large cities. This construction, if made of carefully selected materials and properly put together, continues to increase in strength for a period of years so that the cost of maintenance is practically nothing. The monolithic nature of this construction is particularly attractive from the hygienic standpoint and there is no cleaner type of building for the manufacture of textiles. No opportunity is offered by cracks and crevices for the lodgment of dirt or the breeding of disease germs. In buildings having wooden roofs using large amounts of steam, such as finishing buildings of dye houses, the roof would soon rot out. This would be avoided by concrete construction. It does not require painting and is impervious to the weather.

There is probably no single feature which is so much discussed nor which gives a mill owner so much concern as the trouble caused by vibration. There have been many cases within the last few years in multi-story mill constructed buildings where conditions have become so dangerous due to the vibration caused by looms on the upper floors that it has been necessary to remove these looms to the lower floors or to new buildings of a sturdier construction. The owners of concrete plants are satisfied that they get less vibration in this type of building than in any other. The monolithic character of concrete structures in which all connections and flexible joints are eliminated, largely accounts for its rigidity and for buildings containing high speed textile machinery this construction is ideal.

The preservation of a correct alignment both in shafting and in spinning machinery is of great importance and is secured with much more certainty in a building of this monolithic character than one having wood beams which will show some deflection over a course of a number of years. Any deflection or destruction of the alignment means a loss of power and requires continual maintenance in blocking up and realignment. Repairs to machinery, renewal of bearings and maintenance of shafting are at a minimum.

In considering the cost of a reinforced concrete building today as against slow burning mill construction the following general statement may be made:

Given a specific example considering the same floor loads, column spans, etc., there is very little difference between the cost of a concrete building without the addition of wood floors, and timber construction with brick walls. In fact, it is almost impossible to estimate the difference in cost without taking off actual quantities. The addition of a wood top floor will make the cost of a concrete building greater than that of the slow burning construction by approximately the cost of the wood flooring.

If we compare reinforced concrete against structural steel framing with brick walls, concrete floors and with the structural steel entirely fireproofed, we find that there is very nearly as much concrete in the steel frame construction as in the other and that the structural steel will run very close to twice the amount of reinforced steel. This statement is made having in mind the larger span buildings which are being required today and those of considerable size. Even though the cost of a concrete building is somewhat greater than other types of non-fireproof structures the initial cost is not the only one to be considered as there are certain fixed charges which must enter into the relative value of the buildings. These fixed charges should include insurance, maintenance, depreciation and freedom from vibration. Although these items cannot be actually figured they do have a certain definite value and should be considered when making a comparison of one construction against another.

Although concrete structures have all of the above advantages to recommend it, it is not without its problems. The question of condensation in concrete buildings is a serious one and it has not yet been satisfactorily solved.

There is also a question as to the advisability of painting a concrete mill carrying high humidities with expensive and high grade mill white paints immediately on its completion. In any event extreme care should be taken to see that the painting is not done until after the concrete has thoroughly dried out.

With the solving of such problems a reinforced concrete textile mill will leave nothing to be desired for the up-to-date mill owner.

Lancashire Cotton Trade Not as Gloomy as Painted, Says Macara.

(Daily News Record.)

Manchester, March 20. — The gloomy views expressed by the majority of cotton merchants here are not shared by Sir Charles Macara, Bart., ex-president of the English Federation Master Cotton Spinners' Associations, who regards the Indian import duties as a serious handicap for Lancashire, but maintains that the situation is not so desperate as many believe.

Sir Charles objects strongly to any part of the British Empire being protected against another, and in particular he deprecates the action of the Indian Legislature in selecting the clothing of the poorest people in the world for the subject of protective duties, because it will result inevitably in the cost of that clothing being raised. If the excise duty had been raised correspondingly with the import duty in order to meet revenue needs, no free trader could have complained, but the present proposals mean a handicap of 7½ per cent against the Lancashire exporter, and it is against this preferential treatment of the Bombay manufacturer that the outcry has been raised in England.

Many of the complaints have been based on a misconception, however, Sir Charles continued. In India there are now about 7,000,000 spindles to meet the requirement of a population of more than 300,000,000 people. It takes about 12,000,000 of the 60,000,000 spindles in the British industry to meet the needs of the population of the United Kingdom, and it has taken India well on toward a century to get its 7,000,000

(Continued on Page 27)

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Loom Fixer to Overseer

Written exclusively for Southern Textile Bulletin by "Old Fixer", a man who has had long & varied experience in this work

Manufacture of Leno Tire Fabrics.

The introduction of the automobile has resulted in a demand for several kinds of cotton fabrics. Cotton sheeting, cotton webbing of varying widths and weights, asbestos cloth, canvas-backed and rubber-treated textiles, cotton tubing, linings, certain descriptions of napped and pile textures, breaker-strip cloth and several other kinds of woven and knitted cotton and cotton-mix textures are now used in considerable volume in the modern motor plant. Because of this demand for fabrics of an unusual character a number of mills have put in the necessary machinery for the production of the goods. In this article reference will be made to the manufacture of what is technically known in the automobile industry as the "breaker strip for automobile tires." The composition of this breaker strip is similar to any of the regularly woven leno goods produced on the looms designed for this special texture. The weave is distinct from the regular woven cloth of the ordinary loom. The warp threads in the leno weave do not rest parallel with each other as in the usual system of weaving. The character of the breaker strip and the nature of the service it has to perform when in position in the circumference of the tire requires a gauze-like formation of the threads, so that they are twisted about each other in what seems to be a complicated manner, but which interlacing is uniform and firm. Two divisions of warp threads are required for the weaving of breaker strips.

These two systems are known as the ground or standard warp and the other the douping warp. The mechanical adjustment of the loom is such that the threads of the douping warp are used for effecting the required twist around the ground warp. In some mills the douping warp threads are called whip-threads.

The nature of the leno tire fabric will be understood by examining the accompanying illustrations in which Figure 1 shows the surface texture and Figure 2 the system of twisting and interlacing of the two bodies of warp threads between each pick of filling. The fabric has to be strong, elastic and open. The twist which is put in between each of the filling picks serves to hold the meshes open and produce a texture adapted to the needs of the auto tire manufacturers.

Two Systems of Harness Required.

The style of weaving referred to herewith should not be confused with pile weaving. There are two

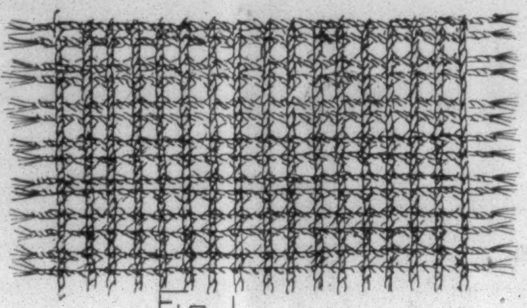

Fig 1

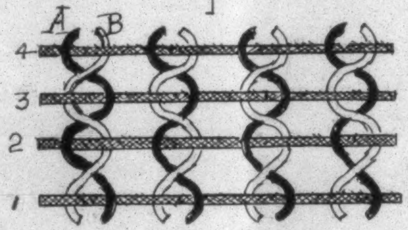

Fig 2

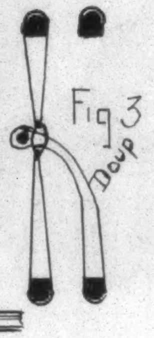

Fig 3

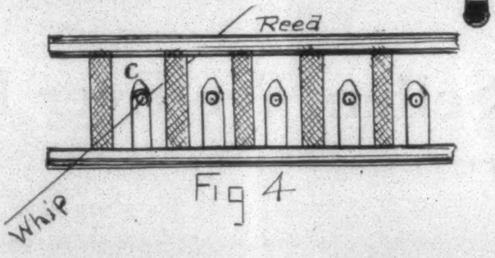

Fig 4

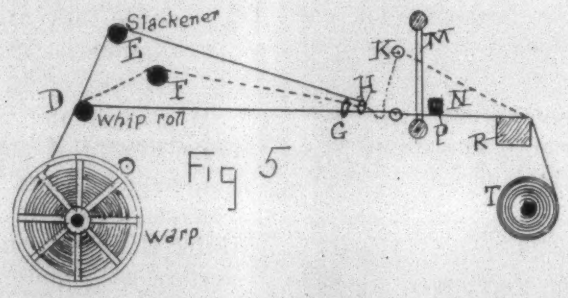

Fig 5

systems of warp threads used and therefore two sets of harness must be employed for the proper manipulation of the warp threads. The harness sets are termed the ground harness set and the douping harness set to conform to the names applied to the ground and the douping warp threads. In Figure 2 it will be observed that the arrangement of the threads is like that in common plain gauze weaving. The light colored threads, marked B, are the ground warp and the dark shaded threads marked A are the douping or whip threads. The arrangement of the douping harness set will be understood by reference to the single doup when shown in Figure 3.

The doup is composed of a strong, fine silk or linen thread fastened to the upper part of a harness frame of standard make, then passing through the eye of the standard heddle as shown, serves to connect the doup with the standard heddle. The whip thread, represented by a black dot, passes through the loop made by the doup extending outward far enough to receive the same.

When the mechanism of the loom lifts the harness frame containing the doup, the latter loosens and allows this thread to be woven into the texture as in ordinary weaving, for the whip thread is on the ground harness. This action causes the whip-thread to assume its former place beside the ground-warp, the doup will raise back of the reed and the pick number one will go into the shed thus formed. In the next motion the ground harness is stationary, the standard heddle and the skeleton harness are raised, the whip-thread also raises, causing the latter thread to go below the ground thread, and the whip-thread will be elevated on the opposite side of the ground-warp, thus making the characteristic twist required in this type of texture. A type of reed used for this weaving is shown in Figure 4, in which the whip-thread passes through the eyes of the central wires as at C. The arrangement of the threads in the loom is shown in Figure 5.

A Slackener Relieves the Tension.

The ordinary whip roll of the loom is designated D. But as the whip-threads are subjected to sever tension in this form of weaving, undue breaking and straining are overcome by passing these threads over a slackener E.

This slackener automatically lowers itself to the position at F so as to ease the whip-threads when the latter are required to twist around the ground warp-threads in the shed as each pick is put in. The shed which is formed by the mechanical action of the different harness sets is represented N. The shuttle in the shed is designated P. G. is the ground heddle eye of the ground warp, E the ground heddle eye for the whip-thread, the doup K when raised, and the reed M. This principle of twisting certain warp threads about other warp threads, with filling threads intervening, results in a texture peculiarly adapted for heavy service such as is needed in anything like an automobile tire. The twisting of the warp threads about one another not only strengthen the warp threads, but serve to hold the filling threads firmly in place regardless of the severe wear put to in auto tires. The twisting of the threads of the warp in this manner keeps the filling threads at even distance apart, so that there is no danger of the latter getting pressed too close in some places and too open in others. The perforations can be regulated in size and with the assurance that uniformity will

(Continued on Page 25.)

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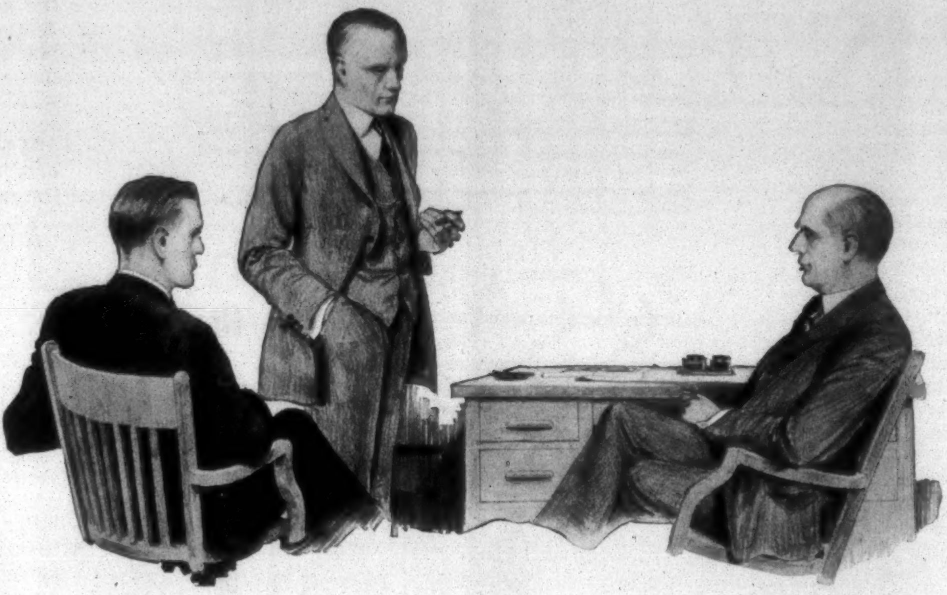

"The Best Sellers We Ever Put Out"

A converter is speaking and is addressing his remarks to a representative of a mill making colored goods.

The "best sellers" that he speaks of are some colored goods that were made for him by the mill just mentioned.

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It's because the goods were dyed by the Franklin Process.

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If you do not already have your dyeing done in one of our plants, we suggest that you send us your next order. The fact that you use Franklin dyed goods will be something that you can merchandise to the converters with good effect.

Ship your yarn to us on cones, packages and parallel tubes. We will dye it and return it to you on parallel tubes ready for the V-creel.

We shall be glad to send our color card and prices upon request.

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Tariff Measures Presented to Senate

Washington.—Herewith are given the cotton manufacturers' rates in the tariff bill, reported to the Senate by the Finance Committee, with comparisons with the Fordney bill and the Payne-Aldrich—the last Republican protective tariff act—and Underwood laws, wherever feasible. The ad valorem rates in the Fordney measure are based on American valuation, but they are not used here in the comparisons. Experts attached to the committee say that 25 per cent American valuation is equal to 50 per cent foreign valuation.

Cotton and Manufactures.

Long staple cotton 7 cents per pound; Fordney, Payne-Aldrich and Underwood free.

Short staple cotton free as in Fordney, Payne-Aldrich and Underwood.

Cotton yarns, including warps, not bleached, dyed, colored, combed or plied, of numbers not exceeding numbers 100, not less than five per cent and, in addition for each number, ¼ of 1 per cent; of numbers exceeding number 100 not less than 30 per cent. Fordney same, except minimum per number rate ⅝ of 1 per cent and maximum 25 per cent; Payne-Aldrich minimum 15 per cent; Underwood 5 to 25 per cent.

Cotton yarn including warps, bleached, dye, colored, or plied, of numbers not exceeding 100 not less than 10 per cent ad valorem and in addition for each number ¼ of 1 per cent; numbers exceeding number 100 not less than 35 per cent with a further provision that where such yarns are printed, dyed or colored with vat dyes they shall pay an additional duty of 5 per cent; Fordney minimum 7 per cent with minimum per number 1-5 of 1 per cent and high numbers not less than 27 per cent; Payne-Aldrich not less than 20 per cent on numbers less than 140; Underwood 7½ per cent to 27½ per cent.

Cotton wastes, sliver and roving 10 per cent, Fordney 5; Payne-Aldrich 20; Underwood 5.

Cotton cloth not bleached, printed or dyed, containing yarn not exceeding number 100, not less than 15 per cent and in addition for each number ¼ of 1 per cent, when exceeding number 100 not less than 40 per cent; Fordney, 15 to 40 per cent with a minimum of 1-5 of 1 per cent for each number; Payne-Aldrich non-comparative, different classification; Underwood, 7½ to 27½ per cent.

Cotton cloth dyed made of similar yarns not less than 15 per cent ad valorem to 45 ad valorem and 3-10 of 1 per cent ad valorem per number below number 100; Fordney from 13 to 33 per cent and 1-5 of 1 per cent number; Payne-Aldrich non-comparable; Underwood, 10 per cent to 30 per cent.

Tire fabric or fabric for use in pneumatic tires, including cord fabric, 25 per cent; Fordney and Underwood same; Payne-Aldrich, 45 per cent.

Pile fabrics included plush or velvet ribbons, 55 per cent; Fordney, 33 1-3 per cent; Payne-Aldrich minimum of 47½ per cent; Underwood, 40 per cent.

Table damask, 40 per cent; Fordney, 28; Payne-Aldrich, 40; Underwood, 25.

Sheets, pillow cases, blankets and towels, 30 per cent; Fordney, 20; Payne-Aldrich, 45; Underwood, 25.

Knit fabrics, 35 to 60 per cent; Fordney, 23 to 35; Payne-Aldrich, 40; Underwood, 30.

Gloves, if single fold and not over 11 inches long, $2 per dozen pairs, and for each additional inch, 10 cents per dozen; if two or more fold, $3.50 per dozen and ten cents per dozen; other fabrics knit gloves, 50 per cent; woven fabric, 40 per cent; Fordney, 23 to 40 per cent; Payne-Aldrich, 40 to 50; Underwood, 35.

Hose and half hose, 70 cents per dozen pairs to 80 per cent; Fordney, 35 cents to 35 per cent; Payne-Aldrich, 70 cents to 55 per cent; Underwood, 70 cents to 50 per cent.

Underwear and all other wearing apparel, finished or unfinished, 40 cents per dozen and 12 1-2 to 40 per cent; Fordney, same; Payne-Aldrich, 60 cents and 15 per cent to 50 per cent; Underwood, 30.

Southern Mill Conditions Better Than in East.

Greenville, S. C.—Conditions generally in the mill industry of the South are more favorable, labor is more efficient, and the South has as bright and as capable minds in industry as are found in any section of the earth, Roger W. Bamson, noted statistician, who heads the Babson Statistical organization, of Wellesley Hills, Mass., is told in a letter which has gone forward to him from John T. Woodside, president of the Woodside Cotton Mills, one of the largest industrial concerns of the section, the letter having been written with others by mill executives, when recent facts about industry in the South as gathered by Mr. Babson was called to the officials' attention by the Greenville Chamber of Commerce, says the Greenville Daily News.

Along this same line a letter from John W. Arrington, head of the Union Bleaching & Finishing Company, which showed that actual investigation of a number of plants in the East and South and comparison of the two, shows that labor here is almost twice as efficient as labor in the East. Other mill men of Greenville are looking into the matter, and the South, particularly the Greenville section, which is regarded as the textile center, will doubtless receive much favorable attention as the result.

"If you will notice the relative growth of the cotton milling industry in the Southern States as compared with the Eastern States," Mr. Woodside said, in part, in his letter to Mr. Babson, "the marked increase of such industry in the South over the East will prove to you that we must have more efficient labor here and more favorable conditions than are to be had in the Eastern States. Otherwise, the South would not have increased in this industry in the much greater ratio than the East. We have as bright and just as capable minds here as are found in any section of the earth."

For a long time, it seems to have been the general impression that Southern labor has impeded the progress of industry here, and this impression Greenville mill men, who know much of conditions in all sections of the country, know are erroneous. With actions such as have been taken by several prominent mill executives in furnishing the facts in the case to the leading statistical organization of the country, it is believed that the matter will be cleared up and the South will receive due credit for the great progress it has made and is making.

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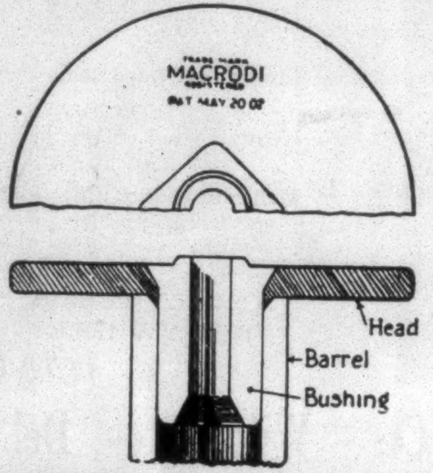

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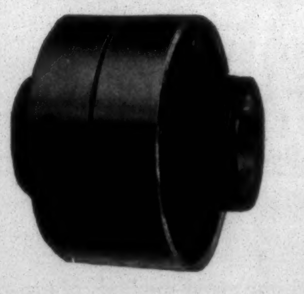

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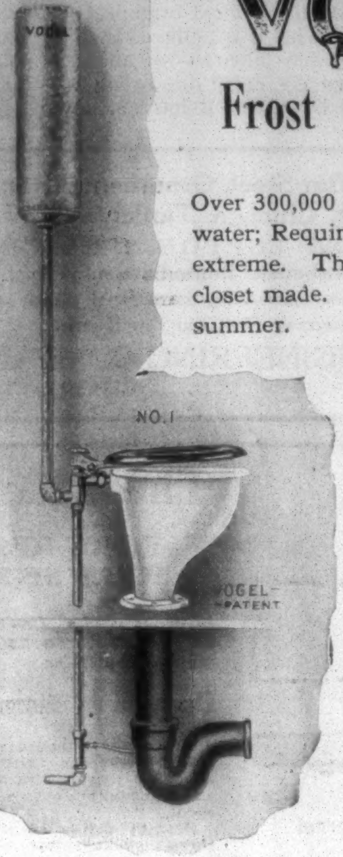

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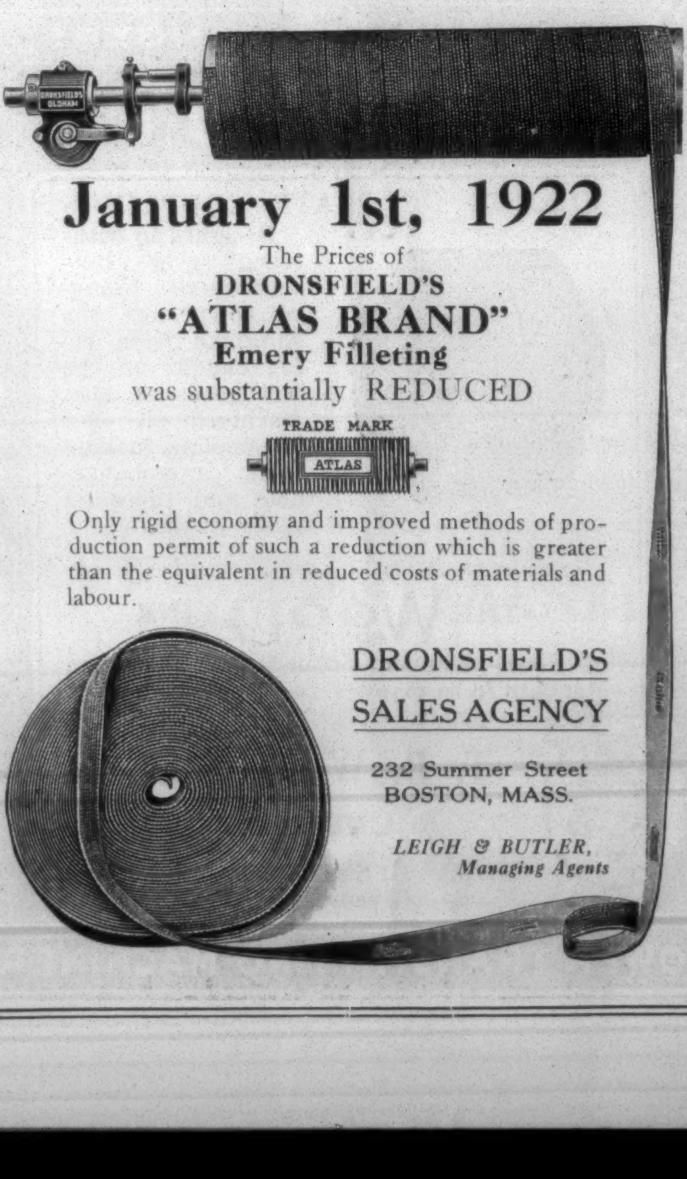

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World Cotton Consumption Increase

Arno S. Pearse, the general secretary of the International Federation of Master Cotton Spinners' and Manufacturers' Associations, has published his statistics relating to the consumption of cotton for the half-year ending January 31 and the stocks of cotton in spinners' hands on February 1, with previous year's figures for comparison. The outstanding features of the tables is the increased consumption of raw cotton throughout the world, and especially in Great Britain during the past half-year compared with the six months ending July 31 last.

In view of the crisis in the cotton industry throughout the world all cotton firms were asked to give the number of spindles stopped and the hours during which they were idle during the past half-year. For England the total number of returns received represents 683 firms, owning 51,162,519 spindles, of which 32,204,981 curtailed production during the six months to the extent of 460,518 hours. This stoppage calculated over the whole industry means an entire suspension during 6.039 weeks, against 12.92 weeks in the previous half-year and 6.04 weeks for the half-year terminating January 31, 1921. An analysis of the returns shows that generally the Egyptian section has been more fully employed than the American section. Thirty-nine firms, representing 4,598,231 spindles out of the 15,725,198 spindles (187 firms), reported as being entirely on Egyptian cotton, had no curtailment whatever during the six months under review, while in the returns of the American section (492 firms) there were only 36 firms, with 3,103,380 spindles, out of the 35,436,321 spindles reported, which had kept to full working hours.

For France the number of spinning spindles is given as 9,600,000, and in that figure are still included 550,733 spindles completely stopped owing to the ravages of the war. Of the workable spindles 421,007 were completely stopped during the half-year and 1,514,760 were partially stopped. The total stoppage of all workable spindles for which returns have been received was 138.05 hours, which equals 2.88 weeks of 48 hours for the whole industry, against 6.92 weeks in the previous half-year.

In Germany there exists in the whole country 9,400,000 spindles. Re-368 were on short time during 1,205-turns have been made by the owners of 8,627,998 spindles, of which 1,119,305 hours. This stoppage is equal to the suspension of all spindles for 3.25 weeks in the half year, as compared with 5.48 weeks in the previous six months. In most other European countries the statistics given show that more machinery has been worked during the past half year than in the previous half year. It is significant that no short time of any kind is reported in India, but in Japan the stoppages through trade depression amounted to 16.52 weeks of 48 hours, against 21.25 weeks in the previous half year.

A striking feature of the returns is that during the past six months the consumption of American cotton in England has been 1,003,772 bales, against only 520,393 bales in the six months ended July 31 last. It is also of interest to mention that stocks of American cotton in the hands of spinners in England on February 1 were 181,493 bales, as compared with 204,533 bales six months previously. The number of spinning spindles in Great Britain is given as 56,420,078, and returns have been received from the owners of 51,162,519 spindles. These are divided into 39,948,414 mule and 11,214,105 ring spindles. A point of interest is that 15,726,198 spindles are using Egyptian cotton and 360,006 spindles are in course of construction.

In reference to the United States, Mr. Pearse says he is only informed that 34,458,000 spindles were "active" and 2,385,000 "idle," which means that the latter used no cotton during the half year. Partial short time is, therefore, not fully accounted for, as is done in the figures for other countries. Russia reports having 6,557,987 spindles "idle" during the half year and 1,100,000 at work last January.

The cotton consumption returns collected by the International Federation from all over the world have quite a special value, says the Manchester "Guardian" in commenting on them. In Lancashire there is generally a tendency to make things look worse than they really are. The United States do the same occasionally, but as a rule they are more disposed to exaggerate improvements, and say little about periodical depressions. Japan and India say next to nothing, and the Continent is not a great deal more communicative. The Federation's statistics, however, reveal the situation as it really is to those who examine them carefully, and for that reason they are well worth the trouble and expense which they involve.

One of the main points, which the tables clears up, is the extent to which short-time was worked in each of the three half-years to the end of January last. The information is precise, and therefore will dissipate all statements which are inconsistent with it. The middle period was the worst of the three in nearly all countries. In Lancashire the mills were working short-time, under a decision of the Federation, in order to curtail production, and for three months coal consumption had to be reduced by 50 per cent under a Government order because of the miners' stoppage. There was also a stoppage from June 6 to 27 owing to a wages dispute in the cotton trade. The time worked in the half-year was, consequently only a small fraction over three days per week on the average. In the half-year to the end of January last, however, the average stoppage was reduced to 6.037 weeks; in other words, the mills were running three-fourths of the possible 48 hours per week. That fact has never been brought out before, nor has it been shown, as it is now, that the extent to which short-time was worked was almost exactly the same as in the half-year to the end of January, 1921. The figures of other countries are not dissimilar to these, and as they are given in the tables we need not repeat them here.

The cotton consumption figures fully corroborate the short-time table, and prove that twice as much spinning was done in the half-year to the end of January last as in the corresponding period of the preceding year. Below we give the principal totals (in thousands of bales) for each of the three half-years ending in January or July:

(000's omitted).

	To Feb., 1922, Bales.	Aug., 1921, Bales.	Feb., 1921. Bales.
Great Britain—			
American	1,003	520	995
Egyptian	152	75	138
All kinds........	1,247	630	1,197
Totals Europe—			
American	2,432	1,660	2,219
Egyptian	225	126	198
All kinds........	3,498	2,157	3,417
Japan—			
American	335	274	273
Egyptian	11	8	5
All kinds........	1,019	971	901
U. S. America—			
American	2,855	2,451	2,221
Egyptian	82	52	58
All kinds	3,003	2,540	2,320

It will be noticed that the United States have had nearly three times as much cotton as we have had, but that is because she spins coarser yarns. Her spindles are estimated at 36,843,000, as against 56,420,078 in Great Britain. France and Germany come next, with 9,600,000 and 9,400,000 spindles, respectively.

Survey of British Cotton Waste Industry.

An exhaustive survey of the cotton waste manufacturing industry in Lancashire has been recently transmitted to the Textile Division, Bureau of Foreign and Domestic Commerce, by Consul R. E. Haladay, at Manchester.

One of the most interesting features of the report is a tabulation giving the names of Lancashire and Yorkshire firms engaged in the manufacture of cloths from cotton waste, giving the exact production of each mill, and what percentage of production is cloth made from cotton waste, as differentiated from wool waste, which is also extensively utilized. As many as 75 waste mills are listed in the Manchester district alone, producing such varied work as flannelettes, blankets, quilts, herringbone sheetings, twills, cords, sponge cloths, ducks, honeycomb towels, crepes, lamp wicking and yarns ranging in count from 1-6s to 6-10s.

"Cotton waste is utilized to the fullest extent both in Lancashire and Yorkshire," the report begins. "Prior to the war any waste produced in the Lancashire mills which was not required by the local users and manufacturers was exported to the Continent of Europe where low counts are spun.

"It is often the case that only one portion of the yarn used in the finishd product is made from cotton waste, the other portion being made from wool or cotton. Generally speaking, cotton waste is manufactured into coarse towelings, dish rags, cheap cotton blankets and flannelettes. The counts used in the manufacture of these goods are reported to be usually very coarse, probably from 5s or 6s with the very best sorts ranging up to 10s or even 12s counts. In a general way yarns spun from cotton waste are intended for the wefts of woven goods of one description or another, and the warp may be of better and finer yarn, either from cotton, linen or other textile fiber. Considerable interest has been centered in the subject of cotton-waste spinning in the Manchester district during the past few years, and it is believed that in the near future a good deal more cotton waste will be made into yarn than has hitherto been the case.

"It should also be mentioned that the increase in the number of ordinary cotton spinning mills has probably placed a larger quantity of cotton waste on the market here and it is said this will to some extent compensate for the increased demand for waste caused by the extension in the number of spindles for the spinning of cotton waste into yarn of low counts and quality.

"The mills in Lancashire which use cotton waste in manufacturing cotton cloth are situated in most of the districts of northeast Lancashire The principal districts are in Rossendale, Bury, and Rochdale. It is estimated that in the Rossendale district there are about 200,000 spindles and some 8,000 looms. In Bury the approximate figures are 120,000 spindles and 1,000 looms, all engaged in the hard waste trade. The figures for the Rochdale district are not available. It has been stated, however, that there are in Lancashire about 700,000 spindles engaged in the hard waste trade and about 120,000 spindles in the soft waste trade, but I have not been able to verify these figures. The secretary of the Cotton Waste Spinners' and Manufacturers' Association, an association for spinners and manufacturers using hard waste, informs me that practically all the members of that association are engaged exclusively in the manufacture of cloth froc otton waste (hard). About a dozen of these mills are in the Bury district, between 10 and 40 are in the Rossendale District and the rest of the mills are scattered throughout the county of Lancashire.

"Waste yarns are produced both on the mule and ring frames, but mule spindles would seem to be the greater in number. There are no statistics available, nor has it been possible to obtain reliable figures from firms here giving the approximate per cent of total production under each spinning system.

"Plain looms are used in this district and these vary from 30-inch to 90-inch reed space.

"Waste yarns are prepared on (1) the condenser system and (2) the manifold coiler or preparation system. Both systems are used here. As to which is the better, this is said to depend upon requirements. The coiler system is reported to give the strongest and probably the finest yarns owing to the use of drawing rollers in the preparation machinery. The condenser system is believed to give the fullest threads, and is probably the most used of the two systems.

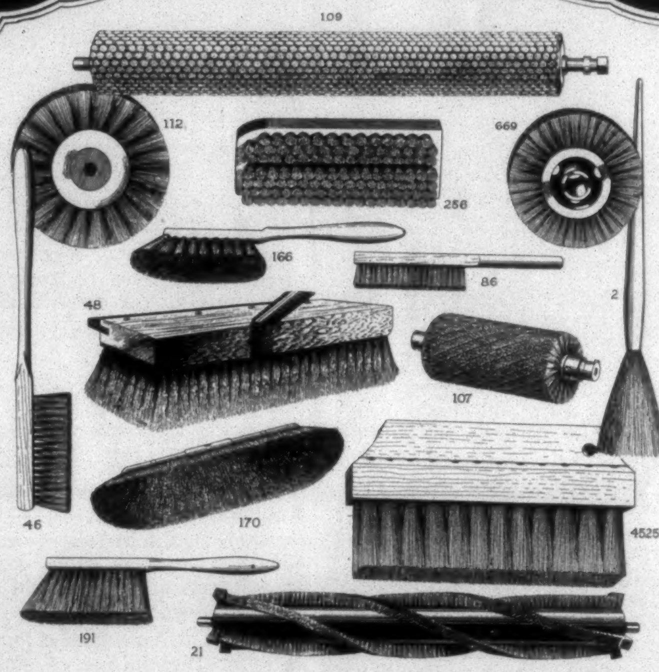
"With regard to the different kinds of cotton waste or materials used and to what extent, I would mention that cotton waste of every description from the spinning mills is used, and this varies according to the requirements and counts of the finished yarns.

"In the hard waste trade the narrow looms make flannelettes and cretonnes, and the broad looms make cotton waste sheetings. In the Manchester district the types of fabrics manufactured from cotton waste comprise generally, cotton sheets, alhambra quilts, cotton blankets, table covers, honeycomb and tapestry quilts, towels, lamp and candle wicks, sponge cloths, dish cloths, scouring cloths, carpets, etc."

Greek Trade in Cotton on Increase.

(Commerce Reports.)

Greece imported 3,725 tons of cotton in 1920, according to a report from Consul General Lowrie. This is the highest figure for eleven years with a single exception of 1914. Cotton exports also reached the highest figure since 1914, 247 tons being exported.



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Promptness in shipping is an added virtue.

Atlanta Brush Co.
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:: IF I WERE BUILDING A MILL ::

Saturday Last Day.

Under the contest rules articles on "If I Were Building a Mill" that are mailed later than Saturday, April 15th, will not be considered as competing for the prizes.

Up to the time of writing this twenty-four articles have been received and there is still plenty of opportunity for somebody to get their article in and win one of the prizes.

After the contest is closed we always receive letters from men asking if they can enter and we are therefore trying to make it plain that Saturday, April 15th, is the last day for the mailing of articles.

Contest Rules

1. Articles must not be longer than three full columns.
2. Articles must be signed with assumed names but the real name and address of the writer must be known to us.
3. The subject, "If I Were Building a Mill," will include anything that has a bearing upon the subject, including the buildings and village.
4. Articles must be original and articles that include paragraphs or sections copied from other articles on this subject will be thrown out. The contestants and all of our readers will be requested to call our attention to any articles that show evidence of having been copied.
5. Articles will be published by us in the order received and the judges will be instructed that where two are of equal merit the decision snall be given to the one received first.
6. In mentioning carding, drawing, roving, spinning, spooling, twisting or warping machinery the name of the maker of such machinery can not be given. This rule will not apply to opening, slashing, finishing or special machinery.
7. No article which is received after April 15, 1921, will be considered in the contest.
8. The contest will be decided by seven practical men who, acting independently of each other, shall read the articles and give us their opinion relative to which is best and second best. A vote for first place will count (1) and a vote for second place will count (½).
9. The article receiving the largest number of the judges' votes will be declared the winner and its writer will receive $25.00. The writer of the article which receives the second largest vote will receive $15.00 and of the third best, $10.00.

Number Four.

If I were building a mill to make No. 20s yarn, I would lay out the spinning as follows:

Would use 208 spindles to frame; 3½ gauge frame with separators; all frames on filling wind. On spooling, I would want 80 spindles to the spooler, with filling tension device to spool the yarn. I would have a skylight running down the middle of the roof with ventilators to open and close in sections of 25 to 30 feet. I would install a telephone from overseer's office to mill office and engine room and connect all overseers' offices with speaking tubes so that they could speak to each other without leaving their respective rooms.

I would use an automatic humidifying system in the spinning room, and use taps driven spinning with the plain spindles, with No. 1 flange ring and use a square pointed traveler. I would have all yarn and roving boxes made of fibre. As to width of alleys, would have all spinning alleys full 36 inches wide and spooler alleys 40 inches wide. I would use all hardwood floors.

For driving spinning and spooling, I would use the direct motor drive to each machine, using no belts in spinning and spooling. I would install an electric driven elevator.

I would build an opener room to open 100 bales of cotton at a time, using a bale breaker to convey the cotton by suction to breaker machine in picker room. An automatic feeder for breakers would carry the laps from breakers to finishers. Between each frame I would have five feet space sidewise and eight feet space lengthwise. To set laps from breakers for finishers I would have 12 feet of space and the length of the room. To set finisher laps for cards I would use the automatic roving bobbin cleaner. I would not cut any roving or thread off of the bobbins and quills. I would use a single process of carding, with 12-inch coilers. Would set the cards facing each other and 24-inch space from each card to grinder so that the card grinders would have plenty of room around the cards.

In drawing, I would use two processes; using metallic steel rolls top and bottom; with mechanical stop motion. I would have 80-spindle slubbers, double flyers, 40-inch alleys. I would install intermediates with 120 spindles each, double flyers, 40-inch alleys. Would use 158-spindle speeders.

I would use automatic looms suitable for the output of cloth, with full 36-inch alleys. I would leave 16 inches of space between each loom in four loom sets, for weavers to pass between.

I would have winders to open from top every 10 or 12 feet apart. I would use the latest machinery in the cloth room, with plenty of inspecting devices, using yard counters on the folders. I would also use ball bearing hangers throughout the mill. On slasher cylinders I would use single head slashers.

I would operate the mill entirely by electrical power, making my own power if possible, from turbines.

In the village I would have all streets paved and electrically lighted, not build more than 2 houses of the same design, nor over 5 painted and trimmed alike. I would have electric lights and water in each house, with sanitary closets and baths in each home. I would erect a community building for a meeting place for the secret orders of both the men and women and a well furnished club room for the amusement of the boys and girls. I would also install swimming pools, having them separate for the boys and girls, and I would also provide a nice library. There would be provision for doctors and trained nurses, as needed, and a welfare worker to look after the needs of each family and to inspect the village and houses each day.

If there were no city churches convenient, I would erect two or more churches. I would equip the mill buildings with sanitary drinking fountains and also place them at intervals throughout the village streets. If there were no moving picture shows nearby, I would build one.

Having built my mill and village, I would hire a superintendent and overseers who could hold things up to the mark.

J. H. A.

Number Five.

If I were building a mill, I would build a 25,000 spindle plant for making 68x72, 80x80 and dimity checks, No. 30s warp and No. 40s filling. I consider this size mill very economical to operate and I could change on to goods that had the best market.

I would erect a bale breaker room and two mixing rooms.

I would build a two-story building for carding and spinning, and would have picking and carding on first floor and spinning, spooling and warping on the second floor.

For slasher, web drawing, weaving and cloth room I would erect a one-story building with saw tooth roof. I would have this building high enough off the ground to put shafting under it to drive looms and other machinery through the floor; one line of shafting to each line of looms; this shaft to be driven by a motor in center of shafting, one motor to each line of shaft.

I would use 1 to 1 1-16-inch staple cotton, opening cotton twice a week. Would take it from 10 bales at a time, repeating this four times, which would give 40 bales for one mixing. I would then run this through the bale breaker and the vertical opener over into one of the mixing rooms. I would let it age 3 days before using and then run it through a conveyor and condenser to the breakers. I would run porpupine beater at 850 r.p.m. and regulate my feed to get a 14-ounce lap. Would have a good automatic feeder. Speed of two-blade beater on breaker lapper, 1200 r.p.m.

Would use three processes of pickers, with following speeds: Speed of 3-blade card beater on intermediate, picker, 850 r.p.m., 12-ounce intermediate lap; speed of 3-blade card beater and finisher picker, 800 r.p.m.; 11-ounce finisher lap.

I would use 40-inch cards; speed of cylinder 160 r.p.m.; speed of licker-in 450 r.p.m.; draft of cards 105; speed of 27-inch doffer, 10 r.p.pm.; pounds per card per day, 90; card sliver 45 grain.

Drawing Frames.

I would use two processes, and metallic rolls. Front roll speed 230 r.p.m. Would have measuring indicators. Weight of fine drawing 44 grains.

Fly Frames.

Three processes of fly frames, slubber, intermediate and fly frames; 11x5½ slubber, 68 spindles, draft 4.05, .76 hank roving, speed of front roll 165 r.p.m.

Intermediates—9x4½. 108 spindles, draft 5:06; 1.90 hank roving; speed of front roll, 145 r.p.m.

Fly Frames—7x3, 148 spindles, draft 6.06, 5.70 hank roving; speed front roll 128 r.p.m. Would make 7.50 hank roving for filling, and would start this change at slubber.

Warp Spinning — Draft 10.50; would have 3½-inch gauge, 1 11-16-inch ring, No. 2 flange, 7-inch traverse filling build, and would not use separators. Would use tape driven spindles; 6 ends to stand and 21-inch roll. I would use single flange ring and cast iron ring holder. Would have adjustable ring and stationary spindle base, one adjusting screw in back of ring rail and two in front to adjust cast iron ring holders. The reason I prefer this is to have rings adjusted with ring rail at bottom of bobbins so the spindles will be absolutely in the center of the ring. Then run ring rail to top of bobbin. See what spindles are out of center of ring; loosen nut on spindle base and pack or shine the base until the spindle comes to the center of ring. Now see that all spindles are exactly in center of ring at top and bottom; keep spindles well oiled with the best spindle oil and do not let Tom, Dick nor Harry monkey with the rings and spindles and the rings will stay in position as plumbed four times longer than they would if the rings were stationary and the spindle base adjustable. You can also see if the ring happens to get out of its place, the spindle still being in its proper position under the guide wire. If the spindle is adjustable and the ring stationary and the spindle gets out of place, it is out of the center of the ring and out of its proper position under the guide wire.

Now there is more strain on the spindle and base than there is on the ring. The base is held in position by friction of a tight nut if the base is of the adjustable type, the knot in the band passes the whorl 200 to 300 times per minute and causes a little jar that is bound to move the base to a certain extent, therefore it is going to get the spindle out of the center of the ring very soon.

On the other hand if your spindle base fits the hole in the spindle rail snugly, and the ring is adjustable, the screws in sides of ring rail are against the ring holder and the rings cannot get out of the center of spindle, unless screws are loosened, so they are not held in place by friction, but by a solid body. With this arrangement, you can run 1-inch roller on 30s warp, 122 to 128 r.p.m. and spinners can run 12 to 16 sides, 102 spindles to side.

Filling Spinning.

Gauge 2¾-inch; 1 5-16 ring; 6 inch traverse, 8 ends to stand; 22-in. roll, no separators; draft 10.70; other specifications same as warp.

I would have a good, modern spooler, size of spool 5x4. Would use plenty of spooling frames so as not to rush the yarn through too fast and damage it. Speed of spoolers, 800 r.p.m., spindle tape driven. There are several good tensions on the market, so I will not name the one I would use.

I would have a good warper with glass creel steps and vibrating drop wires, so they will not hang up when the threads break, thus eliminating laps, loose end and crossed threads at slasher. I would have enough warpers so I could run them slow and not damage the yarn. Size of beam, 54x24 inches.

I would run all filling through a yarn conditioning machine.

Slasher.

In the slasher room I would have a copper hood and a good fan to carry off heat and steam, running the slasher slow enough so that five pounds of steam would dry the yarn.

My size kettle would be of 200 gallons capacity and I would also use a large storage kettle of 500 gallons capacity. Would put the small kettles in slasher room above slasher so they would be out of the way. I would mix size in small kettle and cook it until thoroughly done. Then I would open a valve and run the size to the large storage kettle in basement under the slasher, this storage kettle to have copper coils 2 inches from walls of kettle and all the way up, coils 3 inches apart. Would also have coil to cover the bottom of kettle the same way. Coils would have no holes in them, thus keeping all condensation out of the size. The steam would come in this coil at top of kettle and pass out at bottom after condensation and would pass off through a steam trap.

I would feed the steam to the perforated copper pipe in size box through a quarter inch pipe. The condensation that goes into the size at this point would be sufficient to keep the size at the proper consistency.

I would keep the storage kettle one-quarter to three-quarters full all the time. In the kettle I would have an agitator consisting of two paddles at bottom and a 20-inch worm made of sheet copper bolted to upright shaft, the worm to start at paddles and come up within 18 inches of the top of kettle.

By running new size into the old size and keeping it boiling hot and moving fast, you will not be bothered with hard and soft warps and shedding. This arrangement will change size in size box about every four minutes. Have size coming in at one end of box and overflowing at the other. Pump to deliver 10 gallons per minute to size box.

I would use a good warp tying-in machine.

In the weave room I would have 40-inch automatic looms, with extra attachment for making dimity checks. I would pay the weavers by the pound instead of by the cut.

Cloth Room.

For my inspection work in the cloth room, I would have inspecting machines for the inspectors, the inspectors to mark all imperfectations by tacking a red thread through the selvage of the cloth. After cloth was folded, I would have a good hand go through it and fix all bad places than can be fixed and wash out all oil. Then I would have graders go through the cloth and cull out all that would not pass. I would put it in 400-pound bales for domestic use.

I would run my mill by electric power; picking machinery, slubbers, intermediates, fly frames, and spinning frames to have individual motor drive.

I would install a good humidifying equipment that would give out sufficient humidity for dry and windy weather. For heating the mill, would use steam pipe overhead.

Another point is that I would use hank indicators on all spinning frames and pay by the hank.

In the village I would build 75 per cent of the houses with 4 rooms and 25 per cent of them with 6 rooms.

I would install electric lights and a complete water works system, and families could have a good garden and flower yard.

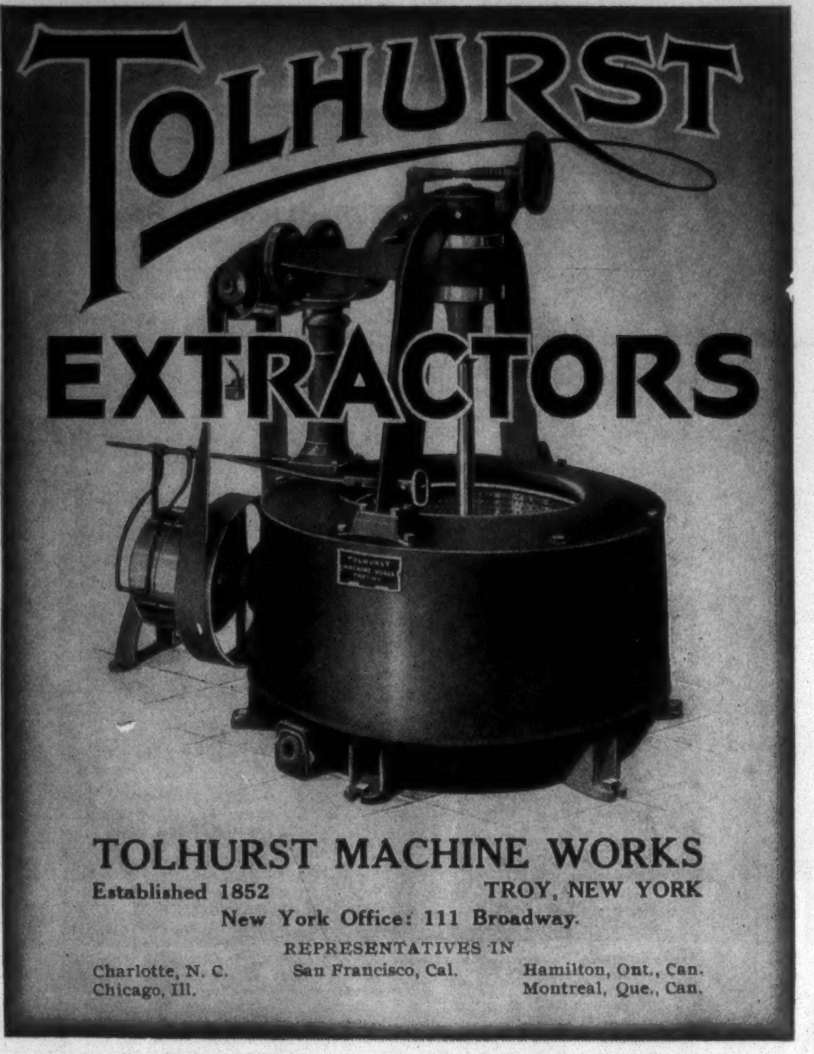
Traveler Ring.

Number Six.

Having secured a suitable location, the first step is to get a firm foundation for buildings, eliminate all danger of sinking, select very best of material for building. We are planning for approximately 40,000 spindles and 1,000 looms on standard print goods, say 36 to 40 inches in width, four to five-yard goods. Warehouse built in sections, absolutely fire proof, and well equipped with sprinkling system, each section to take care of 100 bales. Opening and mixing to be done so that each day's run will stand 24 hours before using. Use Crighton openers in warehouse, two machines with automatic feed. Blow cotton from warehouse through conveyor pipe with condenser in opening room.

Use Horton automatic distribut-

(Continued on Page 22)



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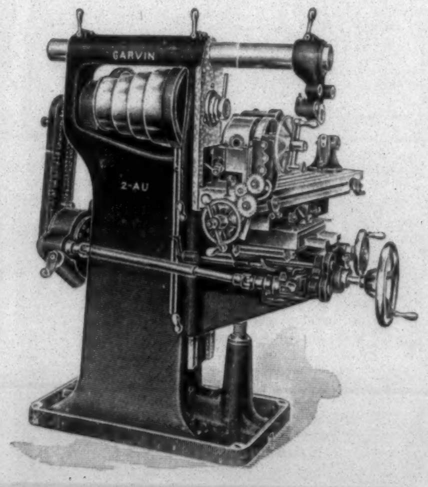

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Buck Creek Cotton Mills	Siluria, Alabama
Gainesville Cotton Mills	Gainesville, Georgia
Hillside Cotton Mills	LaGrange, Ga.
Pacolet Manufacturing Co.	New Holland, Georgia
Thomaston Cotton Mills	Thomaston, Georgia
Wiscassett Mills	Albemarle, N. C.
Crescent Spinning Mills	Belmont, N. C.
Mecklenburg Mills	Charlotte, N. C.
Savona Manufacturing Co.	Charlotte, N. C.
Cannon Manufacturing Co.	Concord, N. C.
Florence Mills	Forest City, N. C.
Clara Mills	Gastonia, N. C.
Myers Mills	Gastonia, N. C.
Victory Mills	Gastonia, N. C.
Pomona Mills	Greensboro, N. C.
Proximity Cotton Mills	Greensboro, N. C.
White Oak Cotton Mills	Greensboro, N. C.
Cannon Manufacturing Co.	Kannapolis, N. C.
Cabarrus Cotton Mills	Kannapolis, N. C.
Kannapolis Cotton Mills	Kannapolis, N. C.
Linn Mills	Landis, N. C.
Erlanger Mills	Lexington, N. C.
Yadkin Finishing Co.	Lexington, N. C.
Mayo Mills	Mayodan, N. C.
Mays Mills	Mayworth, N. C.
Iceman Knitting Mills	Monroe, C.
Patterson Mills	Roanoke Rapids, N. C.
Roanoke Mills	Roanoke Rapids, N. C.
Rosemary Manufacturing Co.	Rosemary, N. C.
Roxboro Cotton Mills	Roxboro, N. C.
Entwistle Manufacturing Co.	Rockingham, N. C.
Pee Dee Cotton Mills	Rockingham, N. C.
Rowan Cotton Mills	Salisbury, N. C.
Eastside Mills	Shelby, N. C.
Spindale Mills	Spindale, N. C.
Erwin Cotton Mills	West Durham, N. C.
Hanes Knitting Mills	Winston-Salem, N. C.
Brogon Mills	Anderson, S. C.
Union-Buffalo Mills	Buffalo, S. C.
Baldwin Cotton Mills	Chester, S. C.
Springstein Mills	Chester, S. C.
Clifton Manufacturing Co.	Converse, S. C.
Cash Mills	Gaffney, S. C.
American Spinning Co.	Greenville, S. C.
Brandon Mills	Greenville, S. C.
Dunean Mills	Greenville, S. C.
Poe Mills	Greenville, S. C.
Victor-Monaghan Mills	Greenville, S. C.
Woodside Cotton Mills	Greenville, S. C.
Republic Cotton Mills	Great Falls, S. C.
Laurens Cotton Mills	Laurens, S. C.
Pacolet Manufacturing Co.	Pacolet, S. C.
Pelzer Manufacturing Co.	Pelzer, S. C.
Piedmont Manufacturing Co.	Piedmont, S. C.
Arcade Cotton Mills	Rock Hill, S. C.
Blue Buckle Cotton Mills	Rock Hill, S. C.
Wymojo Cotton Mills	Rock Hill, S. C.
Spartan Mills	Spartanburg, S. C.
Ware Shoals Manufacturing Co.	Ware Shoals, S. C.
Glen-Lowry Manufacturing Co.	Whitmire, S. C.
Winnsboro Mills	Winnsboro, S. C.
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Agitation Over Textile Tarriff

(Journal of Commerce.)

News of the prospect of another tariff struggle in which textile schedules will figure prominently will be mighty unpleasant reading to many dry goods merchants who can recall what the country went through when the Payne-Aldrich tariff was in the making, and afterward. Measures taken to prevent favoritism in the schedules failed in Congressional channels, and the fight went to the country and eventually brought on the Underwood bill.

The great body of dry goods men may be safely classed as high protectionist in tariff belief, but there are a great many merchants who care much less about excessive protection than they do about stability in business conditions. Stability in trade with tariff agitation is as impossible as anything can be. If there is to be tariff agitation centering around textile schedules there will be no peace or stability in the trade until after the next Presidential election, if then.

There are new forces that are being stirred within the trade and outside of it, and how they will act can only be surmised. Men interested in the plan of American valuations as presented in the Fordney bill have expressed astonishment many times in recent months because of the determined opposition made to that measure by dry goods retailers represented in the National Retail Association. Had there been that sort of a protest made about the action of the Senate in 1909 there is little reason to doubt that the warnings of Dolliver and LaFollette would have been heeded.

If the retailers of the country should carry their valuation protests to a dissection and an agitation of unfair textile schedules in a Senate bill such as is now hinted at no one can tell what the course of political events may be.

Woman in the Case.

In the political period following the enactment of the Payne-Aldrich law it was a singular fact that in those States where woman suffrage was a factor or nearly so in the elections, the protest against that bill was unmistakable. It was due in large part to the fact that a new form of tariff education was undertaken in the distribution of samples of cloth with figures showing just how various tariff clauses and rates applied to them.

Today, women are voters. They have not been educated on tariff matters. If the textile schedules in the tariff bill now under consideration are to become objects of serious grievance, the women of this country will receive a primary education in tariff with cloths and garments as the rudiments. What women do not know about cloth and the things they wear are likely to be told to them if the politicians of the country get busy with a tariff bill and again use samples for primary instructoin. No wise merchant wants to contemplate a political future in which women will become tariff ranters at the retail counters or elsewhere.

Many dry goods merchants have been aggravated beyond expression by the long delays and the dilly-dallying of a majority Republican Government on a subject so well agreed upon as a party policy among Republicans. Most of them were prepared to stand for a Payne-Aldrich bill without a quiver. Had such a bill with the valuation clause left out been enacted as a temporary measure and a relief from both Underwood and emergency laws, it would probably have met with a full measure of approval in trade circles. It would at least have removed that phase of trade uncertainty that arises from all tariff agitation. It probably would not have avoided the present depression but it would have done something toward it at least.

Tried to Dodge Trouble.

The textile trades in manufacturing and mercantile channels have tried hard to avoid a series of troubles arising from divided counsels and opinions, and although Congress has been fiddling with tariff matters for more than a year it has not been pestered as much as usual by trade delegations and by heated public protests. To some extent a semblance of harmony has been maintained through the workings of various committees of manufacturers' and merchants' associations.

Even the eternal squabbles of the wool trade have been minimized by a more courteous understanding between the carded wool and the worsted wool interests. The more fanatical men in the trade have been as impetuous as usual in the denunciation of all "importers," "free traders" and other similar obstructionists, but that only adds to the gaiety of life in a tariff changing period. The general trade sentiment among merchants and manufacturers has been one of "dodging trouble" on the theory that while a high and exclusive tariff bill would be reported, it would not be so offensively high as to invite protest within Republican ranks or leave a law naked to its enemies.

Until the provisions suggested in the Senate Committee bill began to come to trade notice it was not seriously thought that any trade protest would be made.

It is disclosing no secret to say that some of the past devotees of very high protection among textile merchants have changed their minds to some extent about the wisdom of an exclusive business world in the United States, but they were hardly likely to be stirred to action save in the possible instance of advances being excessive and needless.

Some of them even declined to attend meetings of their own associations when they know tariff matters were coming up. They voted to have committees empowered to do what they saw fit and report after the bill was a law. The scattered Democrats in dry goods have been quite willing to allow the Republicans to do their worst.

Soft Pedalling is Prudent.

The rumblings of trouble heard in the trade thus far have come from an entirely new element in tariff criticism. It is true that some of the Fair Trade League names are familiar as low tariff advocates, but they are so few in comparison with the other supporters who are honeycombing the country that the trade should not be lulled to sleep by shoutings about "importers" and "scalawags" and other things that usually go on the tongue to any protestant against high tariffs.

The desire that the rates shall not be needlessly high is general, and any analysis of what "needlessly high" means discloses that a rate susceptible of criticism that will make a defendant of a merchant is dangerous to the peace of trade. A news paragraph in this journal on Wednesday stated that a rate was proposed on underwear that would bring protection up to 140 per cent ad valorem. Anything of that sort would be "needlessly high" and dangerous because it would make every manufacturer of knit goods in the country a defendant in his own community.

It is believed by most merchants who are in close touch with Washington that while the Senate committee may bring out some very high rates, they will not be accepted, and in many instances will be ridiculed by the public, to say nothing of partisans of the Senators. The country wants action on the tariff bill, but if the dry goods world is typical of other lines of business it wants a rest from and not a continuation of tariff meddling.

It is the fact now, as it has been before in recent years of tariff making, that a few representatives of the textile trades appear as politicians rather than business men, and they are the ones who finally bring upon the trade the condemnation of the public. This was so in 1894 and in every tariff year since. But that need not be a case for permitting the kind of tariff outrage that caused the long uncertainties from 1909 forward. The agitation stage should not be wheeled into the limelight, as dry goods men have troubles enough without it.

British Textile Institute Conference.

Manchester, Eng.—The annual general meeting of the British Textile Institute will be held this year at the Institute Buildings in Manchester, from April 25 to 29, inclusive. Last year, the annual spring conference was held at Basle, Switzerland.

An exhibition of cloths and yarns has been arranged for showing in conjunction with the meeting, under the auspices of the institute. The exceptional interest displayed at a similar exhibition, held at the time of the World Cotton Congress at Manchester last June, has prompted the decision to promote a like exhibition at this event.

"On that occasion," says the institute, "the aim was to secure a collection of latest productions in yarns and fabrics, with particular reference to the cotton industry in which so many of the American visitors were specially interested. This year, it is hoped to cover the altogether wider geld, and invitations have been issued to possible exhibitors in various branches of the textile industry. It is felt that it would be an enormous advantage if opportunity can be provided for representatives of the various branches of the industry to witness examples of most recent tendencies and developments in the respective branches.

Russia Exports Flax.

(Commerce Reports.)

Trade Commissioner Young at Riga reports that one thousand tons of Russian flax stored in Riga warehouses have been sold recently to the French Association Liniere by the Soviet Commissariat at Latvia.

Say South is Gaining in the Hosiery Field.

Philadelphia, April 9.—How industrial expansion follows the "open shop" is emphasized by textile manufacturers here in the percentage of gain in the number of hosiery and underwear mills in localities where labor is not dominated by the unions.

They point to the fact that Philadelphia is in keen competition for its position in the hosiery industry and that there is danger the world hosiery center will be shifted to some other section of the country.

Figures show that in the period from 1916 to 1921, inclusive, there was a gain of 25 per cent in hosiery mills in Philadelphia, where full fashioned hosiery workers are strongly organized and where, last year, they maintained a strike that continued for nine months. In the same period the gain for Chattanooga, Tenn., was from six mills in 1916 to eighteen mills in 1921, an increase of 200 per cent. In 1916 Tennessee had thirty-one mills and last year it had seventy-seven, a gain of more than 100 per cent. North Carolina shows about the same ratio of gain, with 175 mills listed in the 1921 knitting trades directory, as against eighty-nine in 1916.

The State of Tennessee and North Carolina combined had last year within twenty-eight more hosiery and underwear mills than Philadelphia and Reading, Pa., combined, whereas in 1916 the same directory shows Philadelphia led the two Southern States by sixteen mills.

"There is no gainsaying that capital has been attracted to the South by the lower cost of production there," said a representative of the National Association of Hosiery & Underwear Manufacturers. "Two years ago there was not a full fashioned hosiery mill in the South, where now one is already established and another is contemplated. Only a few years ago there were but two full fashioned hosiery mills in Reading, Pa. Now there are five and the capacity of one is being doubled.

"In a recent comparison in the cost of one operation in a completely equipped hosiery mill in Pennsylvania and in a Southern State it was disclosed that a manufacturer in the South is paying 18c an hour, while in Pennsylvania 50c an hour is being paid. The rate in Pennsylvania varies, being above 50c in one city, while in several sections it is less. It is likely, too, that there is a variation, depending on locality and environment, in the Southern territory."

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It may be that the heat and moisture is not properly exhausted. The two combined make the room almost unbearable to work in and prevents efficient and satisfactory results.

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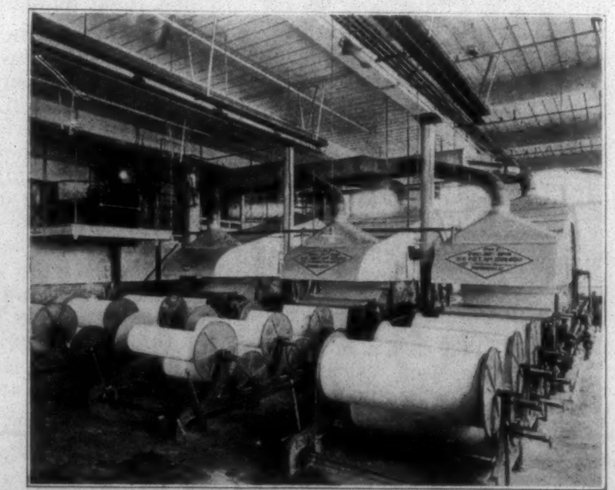
They are the result of twenty years of practical experience and are pronounced by experts as being the most perfect Slasher Hood on the market.



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SOUTHERN
TEXTILE BULLETIN
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THURSDAY, APRIL 13, 1922.

The New England Situation.

In order to obtain first hand information relative to the strike situation, our editor made a special trip to New England last week and spent four days in the strike towns.

He talked to cotton manufacturers, machinery and supply men, men, whom he met upon the streets, on street cars, etc., and tried in every way to get the attitude of the people relative to the cotton mill strike which is spreading over New England.

There were three outstanding impressions obtained.

(1) The mills are fully determined to fight it out with the unions even though it requires them to remain idle throughout the entire summer.

(2) The mills have made the reduction in wages because they could not sell goods except at severe losses and are better off idle than they would be if in operation.

(3) Public sentiment is solidly against the mills.

It, of course, seems strange that public sentiment should be against the mills under such circumstances but it is nevertheless a fact and we attribute it to the manner in which the mill men have conducted themselves.

It is very evident that the New England mills have the idea that the public will be willing for them to reduce wages if it could be shown that they were not making profits but the public does not give a rap whether the mills are operating at a profit or not as it believes that at times the mills make large profits and therefore should be able to stand periods of loss. That unquestionably is the attitude of the public mind and the New England mills have been very foolish not to realize that fact.

As we pointed out to one New England cotton manufacturer, the Rhode Island mills have been wailing and crying aloud for twelve weeks and telling the public how badly handicapped they were by Southern competition and yet at the end of the twelve weeks they find public sentiment more strongly against them than at the beginning.

Bad business is to the mills a good excuse for reducing wages but experience has shown that it has no effect upon public sentiment.

We were very much astonished to find that with few exceptions the machinery and supply men with whom we came in touch felt that the cotton mills were in the wrong which was but another evidence of the solidity of public sentiment.

While waiting for a street car at Lawrence we entered into conversation with a very intelligent looking man who had the appearance of a mechanic and as his statements were typical of so many others we heard we think they will be interesting. He did not know that we were from the South or had any particular interest in the strike. Among otther things he said:

(1) That there was no justification for the strike, as the mills were making good profits. He stated the American Woolen Company was going to advance wages 5 per cent, which, of course, was an untrue rumor common to all strikes.

(2) That the strikers as a rule had money saved up and that most of them could secure employment through the large amount of public and private buildings that were being started in that section.

(3) That the strikers could not stand a reduction because rents had not reduced but in some cases had been recently advanced.

(4) That New England cotton mills could not compete with Southern mills. He stated that in the South weavers only received 10 cents per loom per day and negro laborers received 50 cents per day.

Many of his statements were of course incorrect and they are typical of strike conditions but they give the viewpoint of the New England public.

In our opinion the New England cotton manufacturers have handled the strike very badly and have lost rather than gained by continual howling about Southern competition.

If instead of such tactics they had shown the public of New England that the cost of living had been reduced in proportion to the reduction of wages, we believe that public sentiment would change.

If they would show the merchants of strike towns how much business they are losing through the loss of the mill pay rolls, many of them would cease to encourage the strikers.

If business conditions do not improve the New England strike will last for months for very few of the mills are anxious to start even at the reduced scale of wages.

If business does improve so that the mills are offered business at a profit, they will quickly compromise or yield to the union demands.

For the present the large portion of the New England mills outside of New Bedford and Fall River are idle and the curtailed production of cotton goods is amounting to a considerable volume.

The present curtailment of the Pacific Mills amounts to almost one million yards weekly and it is estimated that the curtailment of ginghams has already amounted to 25,000,000 yards.

As soon as the stocks are absorbed the effect of this curtailment will be felt and well posted cotton goods men in New York predict a radical improvement in the cotton goods business.

McNider Rattles.

Members of the American Legion will read with surprise the following statement by their National Commander, Hanford McNider:

> Oklahoma City, April 4.—Prediction that the American Legion and the American Federation of Labor "will be found working hand in hand through all the years to come for the benefit of all their members and the good of the country," was made here last night by Hanford McNider, National Commander of the Legion.

McNider rattles around in the shoes of the late Fitz Galbraith like a shriveled pea in an oversize pod.

Signs of Improvement.

The prosperity of the cotton manufacturing industry depends to a large extent upon the prosperity of the lines of business and as indicating the trend of business we give the following extracts that have been clipped from various papers during the past week:

United States Steel common was quoted at 99 on Tuesday, the highest quotation in two years.

Packard Motor Car Company received more orders in March for both twin-six and single-six than could be shipped. There are approximately 4,700 men on the payroll, and some departments are working nights.

Durant Motors, Inc., balance sheet, as of March 31 last, shows total assets of $35,493,402, with no liabilities. The company on that date had cash on hand and in banks amounting to $3,028,748.

A reduction from 5 per cent to 4½ per cent in the rediscount rate of the St. Louis Federal Reserve Bank was announced today for all classes of paper and maturities.

Report of General Electric Company for 1921 calendar year shows net profits available for dividends of 21,652,812.

Member New York Cotton Exchange Indicted for Defrauding Member of American Cotton Exchange.

(New York Tribune.)

Henry M. Peers, a member of the New York Cotton Exchange, was arraigned in Tombs Court yesterday charged with the larceny of $10,000 from the firm of Oliver & Houghton, members of the American Cotton Exchange. He was released in $5,000 bail pending examination before Magistrate McAndrews on April 13.

According to the complaint, which was made by J. S. Oliver, of Oliver & Houghton, Peers about March 23 was entrusted with $10,000 with which to purchase cotton on the New York Cotton Exchange. Peers, it is charged, bought the cotton and sold it at a profit, retaining both the margin and the profit. The complaint further sets forth that Peers told Oliver he had speculated and lost the money, having appropriated it to his own use.

Judge Rosalsky in General Sessions indicated yesterday that he favored an early trial for the American Cotton Exchange, which is under indictment on bucketing charges together with its officers and directors. Albert Massey, representing the exchange, in asking that the case against the exchange be placed on the preferred calendar, declared it was the victim of the jealousy of a clique of brokers in the New York Cotton Exchange, who, he said, were alarmed at the inroads the smaller rival had made on their business in the South. The indictments had the effect of hurting the American Cotton Exchange in the South, Mr. Massey said, and for this reason he contended the corporation should have an early opportunity to vindicate itself.

George Gordon Battle, representing broker members of the exchange, also asked that the case be brought to immediate issue. He said it was unfair to keep the organization under a cloud.

Personal News

S. A. Burts has resigned as general manager of the Roswell (Ga.) Manufacturing Company.

J. P. Florence has resigned as overseer of carding at the Hamburger Mills, Columbus, Ga.

J. W. Loggin has resigned as overseer of weaving at the Martel Manufacturing Company, Egan, Ga.

R. W. Goodman, secretary and treasurer of the Tifton (Ga.) Mills, is now also general manager of the Piedmont and Egan Mills, Egan, Ga.

Tracy W. Pratt, president of the West Huntsville Cotton Mills, Huntsville, Ala., has been elected president of the Huntsville Rotary Club.

J. E. Sirrine, mill architect and engineer, of Greenville, has been elected president of the Furman Club, of that city.

Leonard Aitken, general agent of the Lincoln Cotton Mills Company, Huntsville, Ala., has returned from a business trip to New York and Boston.

J. Wilmoth Jackson, of Phenix, Md., formerly of the Judson Mills, Greenville, S. C., has been appointed general manager of the Roswell (Ga.) Manufacturing Company.

John A. Davis, of Pritchard, Ala., has accepted the position of overseer of the cloth room at the Natchez Cotton Products Company, Natchez, Miss.

J. T. Brady has resigned as second hand in carding at the Pelser (S. C.) Manufacturing Company, to become overseer of carding at the Alice Mills, Easley, S. C.

J. A. Holmes has accepted the position as general overseer of weaving at the Miller Cotton Mills, Waco, Texas. He was formerly overseer of weaving at the Loray Mills, Gastonia, N. C.

A. H. Hamilton has resigned as carder and spinner at the Ernaldson Cotton Mills, St. Pauls, N. C., to become assistant superintendent of the Lizzie Mill of the Eastern Manufacturing Company, Selma, Ala.

T. R. Morton has resigned as overseer of carding at the Cabarrus Mills, Kannapolis, N. C., and accepted the position of general superintendent of the Ackerly Cotton Mills, Vernon, Conn.

J. B. Turner, who has been overseer of weaving, slashing and cloth room at night at the Imperial Cotton Mills, Eatonton, Ga., has become assistant overseer of weaving at the Social Circle (Ga.) Mills, night work having been discontinued at the Imperial Mills.

Guy L. Melchor With Howard Bros. Manufacturing Co.

Howard Bros. Manufacturing Comuany, of Worcester, Mass., well known manufacturers of card clothing, have made the following announcement to the trade:

"It is with much pleasure that we are able to announce having secured the services of Guy L. elchor, P. O. Box 332, Atlanta, Ga., as our representative for the extreme Southern territory, and also as assistant to our Southern agent, E. M. Terryberry, office now at 1126 Healey Bldg., Atlanta, Ga.

"Mr. Melchor is already familiar with all of the cotton mills in this territory, having served in the capacity as card clothing salesman for many years and he is recognized as thoroughly qualified in each and every branch of this work."

Postal From Mac Mauldin.

We received this week the following postal from R. M. Mauldin, who recently went out to China as a member of the export department of the Saco-Lowell Shops. Mr. Mauldin had been for some time Southern representative of J. Spencer Turner Company and is well and favorably known to Southern cotton mills:

March 10, 1922.

Dear Dave:

Business looks better here than at home but they tell me it is below normal. Wish you would send me the "Bulletin." I miss it more than any other paper.

Best wishes.

R. M. Mauldin.

Address:
Care Anderson, Meyers & Co.,
Shanghai, China.

Statement

Of Ownership, Management, etc., as required by Act of Congress of August 24, 1912, of Southern Textile Bulletin, published weekly in Charlotte, N. C.

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Owner, David Clark, Charlotte, N. C.

Bondholders, mortagees, None.

(Signed) J. M. Woolley,
Business Manager.

Sworn and subscribed before me this 27th day of March, 1922.

W. M. Bell,
Notary Public.

My commission expires December 20, 1923.

Cost of Clothing for U. S. Soldier Falls From $306 to $189 Since October.

Boston, Mass.—The cost of clothing a soldier in Uncle Sam's army has decreased from $306 to $189 since October 1, 1921, a bulletin received here from the War Department said. Accordingly, the soldier who does not draw a uniform will receive a month's clothing allowance.

Bleached Goods!

(SELLING POINTS No. 36)

What do your customers want?
They want what the customers want:

A permanent white;
not weakened in bleaching;
soft and elastic;
free of chemicals and odor.

All this can be had only with peroxide-bleached goods at no increased cost.

Your mill knows how or can find out from us.

Peroxide Advice Free to Mills.

The Roessler & Hasslacher Chemical Co.
NEW YORK

Bobbins and Spools

True-running Warp Bobbins a Specialty

The Dana S. Courtney Co.
Chicopee, Mass.
Southern Agt, A. B. CARTER, Gastonia, N. C.

MILL NEWS ITEMS OF INTEREST

Rock Hill, S. C.—The Carhartt Mill, which last week began to resume operations, is now running full time in all departments. The plant had been closed down for several weeks because of inability to dispose of stocks.

Fort Mill, S. C.—Both plants of the Fort Mill Manufacturing Company are running on full time and one of the mills is running a part of its plant on night work as well. The management of both mills is said to be experiencing little or no trouble in selling its product.

Huntsville, Ala.—Confirmation of the sale of the Fulton Cotton Mills of Athens, Ala., to the hondholders, Spencer, Turner & Co., of New York, the First National Bank of Birmingham and the First National Bank of Athens has been announced by Referee Jere Murphy of the bankruptcy court. The purchasers hold $250,000 of the bonds of the bankrupt mill, and their bid was for $125,000. The mill is idle at present, and has been for some time. Whether or not it is to be put back in operation will be decided at a meeting of representatives of the purchasers on April 15.

Charlotte, N. C.—A deed of transfer of the Fidelity Manufacturing Company property to the Holly Manufacturing Company, recently incorporated and composed of A. F. Rhyne, W. H. Belk, F. D. Alexander and W. R. Robertson, by William Anderson, receiver, was filed for record with the clerk of the court.

The price at which the buyers bid in the property at the receiver's sale on February 6 was $135,000. The sale has been completed and confirmed by the court. Included in the property is the 11 acres of land on North Graham street, at the intersection of the Southern and Seaboard Railroad lines, as well as the mill and equipment formerly owned and operated by the Fidelity organization.

Kingsville, Tex.—The Kingsville Cotton Mills Company here has made its first run and last week made the first shipment of its finished product. One hundred pounds of wrapping twine was forwarded to the Shiner-Sein Paper Company of San Antonio. While only one of the finishing machines has arrived and has been installed, the mill is in operation and twine is being finished every day. Three additional machines have been ordered and their arrival is expected every day, and when installed will give the mill an output of 15,000 pounds of twine a week.

The mill also has 700 spindles installed, and when complete will represent an investment of $200,000. It is planned to enlarge the plant and install several hundred looms and possibly a dyeing plant later. The mill has been built entirely with local capital.

Ware Shoals, S. C.—Plans for the erection of 100 houses and a vast amount of other improvements at Ware Shoals in this county during the coming year were announced recently by the Ware Shoals Manufacturing Company, one of the largest cotton mill corporations of this section. Work now planned will cost many thousands of dollars and when completed it is claimed that the village of Ware Shoals will have been doubled in every way. Twice as much work will be done, twice as many employees will be required and twice as much goods will be shipped away as was shipped last year, it is stated.

After having been operating only in the day time for over a year, the mills of the Ware Shoals Manufacturing Company began last Monday the regular night and day runs.

The 100 dwelling houses planned will be from four to six-room bungalows equipped with electric lights, sewerage and other modern conveniences. The additional houses will be needed to take care of the extra employees which the expansion of the mills will bring to Ware Shoals.

A large rooming house for women only who wish to work in the mills and have no homes of their own is also planned. The proposed houses will have 25 rooms and will be equipped with hot and cold water, reading rooms, and other features for the amusement and benefit of the occupants.

The present bag factory at Ware Shoals will be enlarged or an additional bag factory erected. A large bleachery is also to be erected so that all cloth manufactured there can be bleached without the necessity of shipment elsewhere.

It is probable that a night superintendent will be added to the force, it is stated. The Y. M. C. A. at Ware Shoals plans to give night and day picture shows for the benefit of both night and day shifts.

All departments of the mills will be expanded and hundreds of additional employees will be added to the force now needed. With the twenty-four hour operation now, many departments are short of help.

The addition of many houses to the village will furnish employment for a large number of carpenters in this section as well as furnishing permanent employment to a large number of employees who will move to the village.

Hosiery Demand Improves.

Chattanooga, Tenn.—Improvement in the demand for hosiery is reported by a number of leading textile men in the Chattanooga district. April is starting off well from a hosiery standpoint. There is a noticeable improvement over the first two months of the year. Several men stated, however, that business is hardly as good this April as the same month last year.

Mills in the section are running on an average of about 50 per cent of machine production. It seems that there is a much better demand for silk goods at the present time. This probably accounts for the fact that some mills are on a large production basis. The Davenport Hosiery Mills are running 100 per cent. This mill manufactures exclusively women's silk hosiery.

The demand now is for light colors. Any shade of gray or light brown or tan in silk hosiery is good. At this season of the year, mills are usually pretty busy, particularly those manufacturing women's hosiery since spring buying is just beginning.

Textile Papers Will Feature Engineers' Meeting.

The meeting of the American Society of Mechanical Engineers in Atlanta on May 8 and 11 will be of unusual interest to the textile industry and many mill men are expected to attend at least a part of the sessions, owing to the number of addresses that will be made on cotton manufacturing. A large part of the program will be devoted to this subject and some very interesting talks will be made by leading textile engineers. Included in the

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Tanks
at HOPEWELL, Va.
New Tanks, long leaf pine or fir, 10'6" diameter bottom to 13' ¼" bottom, 6'8", 7'9" and 11'6" high; all new and complete with round screw hoops and couplets, 2¾" stock. Let us have your inquiries. E. I. DuPont de Nemours & Co., Special Products Division, 7038 DuPont Building, Wilmington, Del.

CLEAN QUALITY SUPERIOR SERVICE
If a drive is worth belting, it is worth belting well. Why be satisfied with a mediocre belt? Cheap belting is false economy—the safest investment in the world has always been REPUTATION.
Charlotte Leather Belting Co.
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Improved Dobby Chain
PATENTED
Dobby Cords
Rice Dobby Chain Co.
Millbury, Mass.
Send Us Your Order To-day

program are the following addresses relating to textile manufacturing:

"Cotton Ginning Machinery," S. E Gillespie, Dallas, Texas.

"Increased Textile Production," H. E. Lindley, Atlanta, Ga.

"The Maintenance of Textile Machinery," E. H. Marble, Worcester, Mass.

"Weaving Machinery," L. B. Jenks, Crompton & Knowles, Worcester, Mass.

"Comparison of Southern White Labor with Foreign Labor of the North," F. H. Neely, Fulton Bag & Cotton Mills, Atlanta, Ga.

"Management in Textile Plants," Geo. S. Harris, Exposition Cotton Mills, Atlanta, Ga.

"Reducing Costs in Textile Mills by Increasing Costs," E. A. Lucey, New York.

"Modern Shop Methods in the Manufacture of Revolving Flat Cards," F. E. Banfield, Jr., Saco-Lowell Shops, Newton Upper Falls, Mass.

Ware Shoals Manufacturing Co. Sued for $125,000.

Two damage suits aggregating $125,000 have been filed against the Ware Shoals Manufacturing Company, Ware Shoals, S. C.

In the complaint against the defendant company, J. J. Dallas, father of Miss Neva Dallas, who was killed when a scaffold, near the banks of Saluda river, at Ware Shoals, fell with her on July 23, 1916, is suing for $75,000. He alleges in his complaint that the structure which fell with his daughter had been erected by the defendant, and further alleges that it was through their neglect that the structure fell. Leroy Jackson, a young man, who was hurt in the same accident, is suing for $50,000 actual and punitive damages, alleging that he suffered serious and permanent injuries. The plaintiffs are represented by B. J. Best, of Columbia, and Tillman, Mays & Featherstone, of Greenwood, the defendants by Grier & Park, of Greenwood.

Textile Classes Hold Commencement

Spray, N. C.—The members of the night school classes of the Carolina Cotton & Woolen Mills Company community held their annual commencement exercises at one of the Y. M. C. A. buildings Saturday afternoon, April 1st.

This was the closing of one of the most successful years of night school work that the local community had ever conducted. A total of thirty-two night school classes, studying vocational subjects and mill arithmetic, were organized and taught from October, 1921, to April, 1922. There were enrolled in these classes practically three hundred men and boys. Four classes for adult illiterates were also taught, with an enrollment of forty-four men and boys. The classes averaged about fifteen nights of teaching, with an attendance of 65 per cent. The average enrollment was ten pupils per class.

At the commencement exercises, L. W. Clark, general manager of the company, made a very forceful and encouraging talk to the students and teachers who were present for the "finals." The chairman of the Ministerial Association and the superintendent of schools, as well as the editor of the daily paper, made short and interesting talks. Various comments and testimonies were given by students and teachers and there was a very commendable spirit evident throughout the entire program.

Delicious sandwiches, apples and ice cream were served and two reels of educational pictures were shown to the group. After the meeting adjourned the entire assembly got into a group photograph. Separate photographs were also taken of the teachers, of the class in bleaching and dyeing, and a class in textile arithmetic that had particularly good attendance.

Power Development Planned.

Raleigh, N. C.—Immediate demand for electrical power in more than 50 communities served by the Carolina Power & Light Co., that cannot wait for the development of new power plants contemplated by the company, has resulted in a contract with the Tallassee Power Company, of Badin, for 25,000 horse power which will be available for distribution by fall, according to announcement made by P. A. Tillery, general manager of the Carolina Company.

Contemplated construction of a new dam at Swift Island on the Yadkin river, seven mies below Badin has been postponed, and instead the company will construct transmission lines from Sanford to Badin, by way of Swift Island. The construction of the lines and connections with lines already built, will require an outlay of approximately $4,000,000, according to Mr. Tillery.

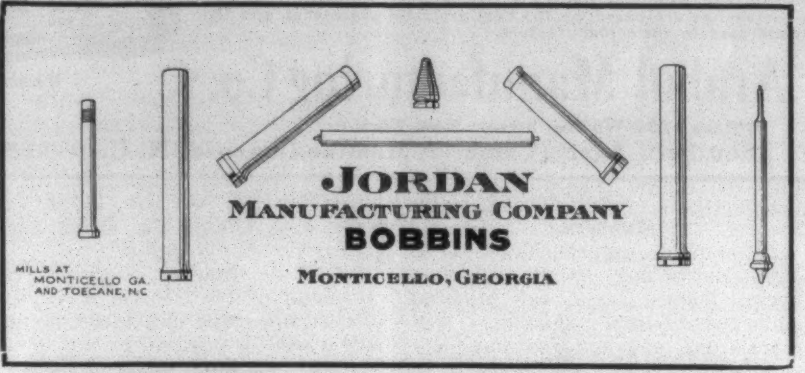
The new lines will, in time, serve to transmit power developed at the contemplated plants at Swift Island and Alman's Ferry, on the Yadkin river. Construction of these plants will be determined by the development of the demand for power in the communities served by the Carolina Company.

Sixty-five cotton mills and many other industrial plants are supplied with power. The company is now marketing about 55,000 horse power. The new contract with the Tallassee Power Company will make available approximately 80,000 for use along the 750 miles of transmission lines.

Shanghai Imports of Raw Cotton.

(Commerce Reports.)

Imports of raw cotton at Shanghai in 1921, as reported to the Textile Division of the Department of Commerce by Trade Commissioner Hoyt, amounted to 469,364 bales, and came principally from India, with 297,000 bales; America with 143,000 bales; Japan with 23,000; and Hongkong with 3,000. These totals do not include Shanghai trans-shipments.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BETTER NON-FLUID OIL LUBRICATION

"Just as Good" does not go with the Mill man

He knows that nothing will take the place of GENUINE

TRADE MARK REGISTERED IN
NON-FLUID OIL
UNITED STATES PATENT OFFICE

Modern Textile Lubricants

For years Mill Men have insisted on NON-FLUID OIL because they found that it gave better and more positive lubrication than liquid oil.

They found that NON-FLUID OIL stayed in the bearing and off the cotton—yielded better lubrication at less cost per month.

There is no "Just as Good" and there is only one genuine NON-FLUID OIL—insist on getting it for your own protection.

Samples sent on request.

NEW YORK & NEW JERSEY LUBRICANT CO.
401 Broadway New York
Southern Agent, L. W. Thomason, Charlotte, N. C.
Ample Stocks at our Branches:
Charlotte, N. C.; Greenville, S. C.; Atlanta, Ga.; New Orleans, La.

AT LESS COST PER MONTH

THE CHOICE OF A HUMIDIFYING SYSTEM

must be one that for simplicity with great capacity and economy in maintenance produces uniformly such conditions that may be determined for the different requirements of the work. In the American Moistening Companys method of humidifying, all such requirements are GUARANTEED.

Our COMINS SECTIONAL HUMIDIFIERS
Our FAN TYPE and HIGH DUTY HUMIDIFIERS
Our VENTILATING Type of Humidifier (Taking fresh air into the room from outside)
Our ATOMIZERS or COMPRESSED AIR SYSTEM
Our COMPRESSED AIR CLEANING SYSTEM
Our CONDITIONING ROOM EQUIPMENT
Our AUTOMATIC HUMIDITY CONTROL (Can be applied to systems already installed)
Our AUTOMTIC TEMPERATURE CONTROL
Are all STANDARDS OF MODERN TEXTILE MILL EQUIPMENTS.

AMERICAN MOISTENING COMPANY
RUSSELL GRINNELL, President
BOSTON, MASS.
FRANK B. COMINS, General Manager
SOUTHERN OFFICE, Atlanta Trust Company Building, ATLANTA, GEORGIA

TALLOW—OILS—GUMS—COMPOUNDS
ALSO HOSIERY FINISHING AND BLEACHINGS
TEXTOL, A new product especially for Print Cloths. A complete warp size, requires no addition of tallow
Tallow, Soluble Grease, Soluble Oils, Gums, Glues, Gum Arabol, Lancashire Size, Waxes, Finishing Pastes, Soaps, Glycerine, Ready-made eavy Size, Sago and Tapioca Flours, Dextrines, China Clay, Soluble Blue Bone Grease, Bleachers' Blue.
SPECIAL COMPOUNDS FOR WARPS, WHERE STOP MOTIONS ARE USED.
WEIGHTING COMPOUNDS FOR COLORED AND WHITE WARPS.
FINISHING COMPOUNDS FOR ALL CLASSES OF FABRICS,
The Arabol best grades of cotton warp sizing compounds make the "finest weaving and will hold the fly."
These compounds are based on the best practical experience and the best materials used in their manufacture.
TRADE MARK
The Arabol Manufacturing Co.
Factories: Brooklyn, N. Y.
Offices: 100 William Street, New York.
Southern Agent: Cameron MacRae, Concord, N. C.
R. P. GIBSON, South Carolina Agent, Greenville, S. C.
GUY L. MELCHOR, Ga., Ala. and Tenn. Agent, Atlanta Ga.

If I Were Building a Mill.

(Continued from Page 15)

ing system on breakers. It is impossible to go into detail as regards the equipment or the number of machines required for a building of this size, as the limited space I have here would interfere with the proper specification. Suffice it to say we should want ample machinery to take care of the amount of stock to be used.

All buildings should be erected with a view to securing plenty of light and ventilation, which calls for higher space between floors, and plenty of windows. Four-story building of sufficient length to give us plenty of working room about our machinery.

Opening.

In this room we want five machines, equipped with Horton automatic distributors and hopper-feed—these breakers to be equipped with 3-blade single beader, running 850 to 900 r.p.m., intermediates, five in number, two-blade single beaders, 1200 r.p.m.; five finishers, two-blade, 1250 r.p.m. Waste machinery consisting of one Kitson two-section standard waste machine, connected with main warehouse condensing system. Pickers equipped with individual motor drives; and sprinkler system.

Cards.

Would want approximately 60 cards producing around 140 pounds each per 10-hour day, cards to be 40 inches, of the latest improved type. Cards should be in separate room with dust exhaust on either side of room. Cards should be well equipped with all grinding and other accessories conducive to first-class work.

Drawing.

Drawing frames should be of latest improved type, fully equipped with stop motions, metallic rolls, four lines. These frames should be in sections of four deliveries each; prefer three (3) processes.

Slubbers.

Size 11x5½, sixty-four to sixty-eight spindles; intermediates 9x4½, one hundred and twenty spindles; roving frames 7x3½, one hundred and twenty-eight spindles; jack frames 6x3, one hundred and forty spindles.

All fly frames to be equipped with ball bearing top rolls, brass lined stands and spindle steps and all spindles, well spaced for quick piecing of ends and doffing.

Spinning.

Regular two hundred and eight spindle frame, 36-inch tape band drive, individual motor driven with single boss ball bearing top rolls, double flange ring cast iron holders, centrifugal clutch spindles, well spaced. Prefer an alley not less than 32 inches, 1½-inch warp ring, 1⅛-inch filling.

Spooling.

Would use a 100-spindle spooler, tape driven, bobbin conveyor, all up-to-date improvements.

Warping.

Would prefer warpers of the electric stop motion type, cone drive, drop wire fans, and all other new improvements.

Slashing.

Would prefer the Lowell geared cylinder, and all of the latest improved equipment necessary for the best quality of work in this room. Would want the patented tying-in machine and drawing-in machine.

Weaving.

Want automatic looms with all improvements. If more than one size of loom, place each size in its own group and allow plenty of working space in alleys.

Boxes and Trucks.

All boxes should be made of the proper size, each for its own special use. Lap racks for picker room should be made to carry eight laps, special "cribs" for card waste. Roving boxes, narrow and deep with fall doors at ends, if necessary. All boxes should be made so that they can pass in alleys. The buildings throughout should be equipped with chutes for the various kinds of waste; also chutes for filling and carriers for empty quills.

Power.

I should prefer electric throughout the mill, using individual motor drive wherever possible.

Machine Shop.

I should prefer a shop thoroughly equipped with every possible facility for keeping the machinery throughout the plant in most perfect working condition, so that no loss of time should hinder the progress of the work around the plant.

Owing to the limited space allowed me in this article, I cannot specify, in detail, as much as I would like, therefore can give only a general outline of what I consider necessary to the equipment of a first-class plant of this kind.

Cloth Room.

In this room we should have every necessary equipment for marketing our goods properly, for much depends on this particular point, consequently would want the very best machinery and equipment that could be found; also plenty of space and plenty of light.

Village.

Having decided upon the number of people to be employed, we now have the task of arranging our village with a view to their comfort and happiness. We must remember that in order to have a successful working force, they must be made comfortable—let us therefore give them the best place to live we can afford.

Would prefer arranging for the larger families to live on a street or block so that the house would be nearly uniform in size; also the smaller houses arranged in a similar order. Would make each lot large enough for garden purposes and arrange for pastures and small farms, if possible.

In conclusion, will say that a great deal depends on the location. We must have a place in close proximity to the raw material and a location where there is good drainage and all other natural advantages we can get.

There are many other things which could be said on this subject, but it is not necessary to mention them here, for the reason that when we come face to face with a problem of this kind, in reality, we can take care of these matters as they present themselves.

Roamer.

Number Seven.

If I were building a mill of 5,000 spindles I would equip it to make 30s yarn in ply, preferably 30-2 in warps, skeins, tubes or cones. It has been my experience that this number of yarn, if made first-class in every particular, is a good seller and allows a good profit to the mill that can manage its business economically in labor cost and supplies. Such a mill can be kept in nice, clean and sanitary condition at all times, as this type of yarn calls for a good grade of cotton running one-inch staple.

Buildings.

The main building would be of sufficient length and width to hold all of the machinery used for manufacturing the yarn. The opening or conditioning room would be separate, 50 feet from the main mill, just off the picker room, and would be large enough to hold a week's supply of cotton in addition to a bale breaker and a vertical opener.

As this is an objectionable department to the fire insurance companies, owing to the amount of loose cotton, it should be built with a fire proof partition between the pile of cotton and the machine, with an opening equipped with an automatic closing fire door. The building should be fully sprinkled and there should also be sprinkler heads in bale breaker and vertical opener.

In main building I would have a five-foot basement for the purpose of carrying all the electric wires, and get the power from below instead of overhead, as is the practice

Manufacturers of Speeders, Skewers, Warp Bobbins, Filling Bobbins, Cap Spinning Bobbins, Northrop Loom Bobbins, Twister Bobbins, Twister Spools, Warper Spools, Comber Rolls, Quills, Underclearer Rolls (plain or covered).

U S Bobbin & Shuttle Co.
57 EDDY STREET
PROVIDENCE, R. I.

SHUTTLES
We make a specialty of Shuttles for all makes of looms, both plain and automatic. Correspondence solicited.

now. By having the wires below, there is less danger of accident and they are always clean and free from lint. The rooms where operatives work would all be equipped with the latest approved methods for sanitation. Each electric unit would have guards as provided by law for the protection of life and limb of the workers.

The main building would have a 12-inch fire wall between picker and card rooms and also a 17-inch fire wall between carding and spinning. This would be done for a two-fold purpose. First, the fire hazard is less, and second, the humidity that would do for the carding will not give the best results for spinning. The fire walls would have automatic closing, fire proof doors. The floors of the main mill would be hardwood. The humidifiers would be electrically driven. The lighting would be to drop lights with reflectors arranged to alternate work aisles to be at least 12 feet from the floor line. Monitors in main mill would run full length. One-third the width of the mill would be of the skeleton type, with windows on each side and ends to carry six lights. I would have 10x12 sash swung in the middle so they could be opened in the summer for ventilation.

Fire protection would consist of 25,000 gallon steel tank, erected on truss tower 60 feet from the ground, and not less than 100 feet from main mill. The buildings would be erected due east and west to avoid glare of the sun and do away with curtains in the windows. Last, but not least, have a good cyclone fence around your mill.

Mill Village.

The houses should be of the 3 and 4-room cottage type and of sufficient number to avoid crowding too many hands in one house. The houses should have front and back porches, with running water in them and a sanitary toilet and bath on the back porches. The houses, where possible, should have 30 feet space between, with lots 75 feet deep. This makes an ideal garden plot and flowers can be planted between houses, keeping all weeds and vegetable matter away from front of houses and sidewalks. No village is complete without a house of worship, where mills are not located near a city. When near cities, the mill churches are usually worked as missions and there are many mill people who do not want to go to city churches because their personal appearances do not measure up to the styles. I have seen instances in churches where the mill people were looked upon as being foreign and people did not want to get too close to them. In every mill village, a good kindergarten for the grown people as well as the children is a great help, for they learn many things they otherwise would not, as they do not come in personal contact with the world as the average person does.

Equipment for the Mill.

Picking Machinery.

One self feeder opener; 30-in. cylinder combined with a single beater breaker lapper; beater and fan bearings to be equipped with ball bearings; speed of cylinder to be 500 r.p.m.; the 2-blade beater, 1.400 r. p. m.

Two single beater finisher lappers equipped with carding beaters, ball bearing; speed 840 r.p.m.; fan bearing to be ball type; aprons on these machines equipped with sprocket chain drives in addition to regular drives. This precaution is taken to prevent slipping of the aprons. Production of each of these machines is to be in the neighborhood of 850 pounds per day, as it is intended to use the two system process.

Cards.

Fifteen 40-in. revolving top cards, clothed as follows: Cylinder, No. 100 top, and doffer No. 110. Draft of cards 100; speed of doffer 11 r.p.m.; weight of sliver 45 grains per yard. Estimated production 100 pounds 26-inch doffer. Ball bearing cylinder pedestal.

Drawing.

Twenty-four heads, 12 breaker, 12 finisher doubling, 6x1 draft; weight of sliver 45 grains per yard; speed of front roll 325 r.p.m., top roll shells to be leather covered; size of front roll 1⅜.

Slubbing.

One hundred and ten spindles; 2 frames, 55 spindles each; gauge of frames 12x6; draft 3.75; hank roving to be .70.

Intermediates.

Three hundred spindles, 3 frames, 100 spindles each; gauge 9x4⅝; draft 5.08, hank roving No. 1.78.

Speeders.

One thousand and eight spindles, 6 frames, 168 spindles each; gauge 7x3½; draft 5.62; hank roving for spinning No. 5.

Spinning—Tape Driven.

Twenty-four frames, 216 spindles each; 1¾-in. No. 1 flange ring. Double adjustable ring fitted in plate holders with traveler cleaners; Speakman lever screws; Dixon adjustable stirrups and saddles; top roll solid, single boss; under clearers 1-in. diameter covered with tubing; no separators, as frames are 3½-in. gauge; traverse for 7-in. stroke, builders to be combination type.

Spoolers.

Five hundred spindles each, 5 frames, 100 spindles each; gauge 5x4½, equipped to wind from filling wound spinning and twister frame bobbins.

Twisters.

Two thousand and four hundred spindles, 12 frames, 200 spindles each, to be tape driven; 3-in. gauge, 1⅞ No. 1 flange ring fitted in cast iron holders; long bolster base type of spindle fitted with Knee brakes combination builder.

Warpers.

One Denn warper, 2,250 ends, double head linkers, fitted to make ball warps.

Reels.

Two 50-spindle reels, one No. 30 winder for tubes or cones, 1 baling press.

It is understood that this is to be an electrically driven mill and each machine is to be fitted with its own motor. The power control will be under the supervision of the master mechanic, who shall have the switch board so arranged so that the picking, carding, or spinning departments can be cut out or run separately. This layout is arranged to take care of each department without excess drafts or speeds in a mill of 5,000 spindles on 30s yarns, getting 1.40 pounds per spindle per week of 60 hours. In this article on building a mill, there are necessarily some things left out that are included in all modern buildings and carry no special features. However, I have every reason to believe that a mill equipped as described above can make a first-class product at nominal cost in labor and upkeep and if quality gets the orders, this ought to bring them.

Old Top.

Discontinuance of Rotterdam Cotton Exchange.

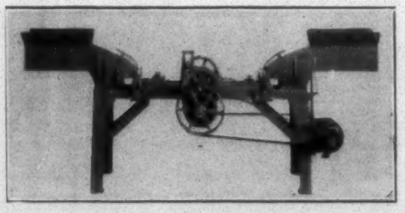
(Commerce Reports.)

The American Legation at the Hague reports that owing to high dock charges and the small amount of encouragement given to the cotton trade, the Rotterdam Cotton Exchange will be discontinued in August, 1922. This exchange was started to attract to Rotterdam the cotton business of Bremen, but the scant encouragement given by the banks, together with heavy dock dues have apparently directed the trade back to the German port.

Give your Spinning Room a Chance

The waste from your Spinning Room can be checked up quickly from the production of an

"UTSMAN"
QUILL CLEANING
MACHINE



by comparing the Quills cleaned per day with the amount of waste removed. It is the saving of Time, Labor and Waste that will help your profits to materialize.

Our Catalog contains many interesting facts—
We will mail you one for a postal.

The Terrell Machine Co., Inc.
CHARLOTTE, N. C.

Southern Mill Stocks

Quoted By

R. S. Dickson & Company

Gastonia, N. C. **Greenville, S. C.**

For Week Ending April 11, 1922.

	Bid.	Asked.
Acme Spinning Co.	90	95
Arcadia Mills	220	—
American Spinning Co.	—	265
Amer. Yarn & Proc. Co.	106	108
Amer. Yarn & Proc. Co., pfd.	—	100
Anderson Cotton Mills	—	78
Arlington Cotton Mills	—	265
Aragon Cotton Mills (S. C.)	190	215
Arcade Cotton Mills	—	115
Arrow Mills	105	130
Augusta Factory	35	41
Belton Cotton Mills	—	61
Belton Cotton Mills, pfd.	60	—
Beaumont Mfg. Co.	218	—
Bibb Mfg. Co.	90	101
Brogon Mills	70	73
Clara Mfg. Co.	—	106
Clifton Mfg. Co.	101	106
Cabarrus Mfg. Co.	174	—
Cabarrus Cotton Mills, pfd.	102	104
Chadwick-Hoskins Co. (par $25)	—	11½
Chadwick-Hoskins Co., pfd.	—	100
Chiquola Mfg. Co., pfd.	80	—
Chiquola Mfg. Co., pfd.	81	—
Calhoun Mills	146	152
Cannon Mfg. Co.	200	—
Climax Spinning Co.	135	—
Crescent Spinning Co.	92	—
Clover Mills	99	106
Columbus Mfg. Co. (Ga.)	159	166
Converse, D. E. Co.	94	97
Darlington Mfg. Co.	66	70
Dixon Mills	101	106
Drayton Mills	40	—
Dresden Cotton Mills	205	220
Dunean Mills	81	—
Dunean Mills, pfd.	88	—
Durham Hosiery "B"	—	27
Durham Hosiery "B"	—	24
Eastern Hfg. Co.	—	98
Eagle & Phenix (Ga.)	—	150
Efird Mfg. Co.	114	115
Enterprise Mfg. Co. (Ga.)	85	98
Erwin Cotton Mills Co.	265	—
Erwin Cotton Mills Co., pfd.	101	—
Flint Mfg. Co.	—	175
Gaffney Mfg. Co.	58	70
Gaffney Mfg. Co.	57	70
Gibson Mfg. Co.	180	—
Globe Yarn Mills (N. C.)	—	64
Grace Cotton Mill Co.	—	75
Gray Mfg. Co.	200	285
Glenwood Cotton Mills	100	112
Gluck Mills	100	104
Greenwood Cotton Mills	170	—
Grendel Mills	—	140
Grendel Mills, pfd. (par $50)	38	45
Graniteville Mfg. Co.	110	—
Hamrick Mills	120	151
Hanes, P. H., Knit'g Co.	11½	12
Hanes, P. H. Knit. Co., pfd.	100	103
Henrietta, pfd.	105	—
Hillside Cotton Mills (Ga.)	—	250
Inman Mills	81	—
Inman Mills, pfd.	92	—
Jennings Cotton Mill	210	231
Judson Mills	255	275
Judson Mills, pfd.	98	100
King, Jno. P. Mfg. Co.	125	150
Lancaster Cotton Mills	198	240
Limestone Mills	—	130
Linford Mills	79	86
Lola Mfg. Co.	95	101
Locke Cotton Mills Co.	115	125
Laurens Cotton Mills	87	—
Marlboro Cotton Mills	73	—
Mills Mill	—	215
Mills Mill, pfd.	96	—
Monarch Mills (S. C.)	102	104
Mollohon Mfg. Co.	98	101
Musgrove Cotton Mills	67	71
Myers Mill	—	72
Myrtle Mills	—	110
National Yarn Mill	135	—
Newberry Cotton Mills	111	—
Orr Cotton Mills	85	88
Orr Cotton Mills, pfd.	86	88
Parkdale Mills	106	125
Pacolet Mfg. Co.	123	127
Pacolet Mfg. Co., pfd.	95	—
Pelzer Mfg. Co.	99	101
Piedmont Mfg. Co. (S. C.)	110	115
Perfection Spinning Co.	79	86
Poe, F. W., Mfg. Co.	—	102
Poinsett Mills	—	71
Priscilla Spinning Co.	60	66
Ranlo Mfg. Co.	105	—
Rex Spinning Co.	—	90
Rex Spinning Co., pfd.	—	89
Ridge Mills	—	76
Riverside Mills (par $12.50)	6¾	7½
Riverside & Dan River, pfd.	100	102
Rowan Cotton Mills Co.	—	76
Roanoke Mills, 1st pfd.	101	103
Roanoke Mills 2nd pfd.	—	98
Rosemary, pfd.	100	102
Inman Mills, pfd.	93	—
International Mills (par $50)	30	32
Jackson Mills	150	—
Judson Mills	250	—
Judson Mills, pfd.	98	—
King, John P. Mfg. Co., Ga.	140	160
Lancaster Cotton Mills	200	—
Laurens Cotton Mills	87	100
Limestone Cotton Mills	120	130
Marion Mfg. Co., N. C.	—	136
Marlboro Mills	70	75
Massachusetts Mills, Ga.	140	145
Mills Mfg. Co.	175	200
Mollohon Mfg. Co.	98	102
Monarch Mills	100	105
Newberry Cotton Mills	111	—
Ninety-Six Mills	150	—
Norris Cotton Mills	—	105
Oakland Cotton Mills	100	120
Oconee Mills	125	—
Orr Cotton Mills	84	88
Orr Cotton Mills, pfd.	88	92
Pacolet Mfg. Co.	122	130
Pelham Mills	—	45
Pelzer Mfg. Co.	—	100
Pickens Cotton Mills	100	—
Piedmont Mfg. Co.	109	115
Poe, F. W. Mfg. Co.	98	—
Poinsett Mills	60	71
Riverside Mills (Par $12.50)	6¾	8
Saxon Mills	75	85
Sibley Mfg. Co., Ga.	45	47
Spartan Mills	108	111
Toxaway Mills (par $25)	27½	—
Tucapau Mills	—	200
Union-Buffalo Mills	—	24
Union-Buffalo Mills, 1st pfd.	78	81
Union-Buffalo Mills, 2d pfd.	40	43
Victor-Monaghan Co.	77½	80
Victor-Monaghan Co., pfd.	100	—
Ware Shoals Mfg. Co.	145	151
Watts Mills	—	110
Whitney Mfg. Co.	—	175
Williamston Mills	200	—
Woodside Cotton Mills	83	86
Woodside Cotton Mills	—	99
Woodside Cotton Mills, pfd.	—	76
W. S. Gray Cot. Mills	90	—

A. M. Law & Co.

SPARTANBURG, S. C

BROKERS

Dealers in Mill Stocks and other Southern Securities.

For Week Ending April 10, 1922.

	Bid.	Asked.
Abbeville Cotton Mills	—	105
American Spinning Co.	—	260
Anderson Cotton Mills	—	80
Aragon Mills	220	—
Arcade Cotton Mills	—	101
Arcadia Mills	225	—
Arkwright Mills	100	150
Augusta Factory, Ga.	30	35
Avondale Mills, Ala.	500	—
Banna Mills	—	100
Beaumont Mfg. Co.	200	225
Belton Cotton Mills	—	85
Belton Cotton Mills, pfd.	61	65
Brogon Mills	70	75
Calhoun Mills	143	165
Chesnee Mills	—	150
Chiqpola Mills	132	180
Chiquola Mills, pfd.	82	—
Clifton Mfg. Co.	100	105
Clinton Cotton Mills	200	—
Columbus Mfg. Co., Ga.	150	165
Cowpens Mills	—	45
D. E. Converse Co.	92	97
Dallas Mfg. Co., Ala.	—	175
Darlington Mfg. Co.	67	74
Drayton Mills	42	50
Dunean Mills	80	—
Dunean Mills, pfd.	88	—
Eagle & Phenix Mills, Ga.	125	145
Enterprise Mfg. Co., Ga.	87	90
Exposition Cotton Mills, Ga.	300	—
Gaffney Mfg. Co.	59	65
Gainesville Cot. Mills, Ga.	100	—
Glenwood Mills	100	115
Gluck Mills	100	103
Graniteville Mfg. Co.	110	118
Greenwood Cotton Mills	175	—
Grendel Mills	90	100
Hamrick Mills	120	150
Hartsville Cotton Mills	—	350
Henrietta Mills, N. C.	—	350
Hermitage Mills	100	150
Inman Mills	80	—
Rhyne-Houser Mfg. Co.	69	75
Saxon Mills	—	81
Seminole Cotton Mills Co.	90	95
Sibley Mfg. Co. (Ga.)	41	46
Spartan Mills	110	—
Sterling Spinning Co.	96	101
Sterling Spinning Co.	96	103
Superior Yarn Mills	—	86
Toxaway Mills (par. $25)	27½	31
Union-Buffalo Mills	—	21
Union-Buffalo Mills, 1st pfd.	78	80
Union-Buffalo Mills, 2d pfd.	40½	—
Victor-Monaghan Co.	78	79
Victor-Monaghan Co., pfd.	100	—
Victory Yarn Mills Co.	—	76
Ware Shoals Mfg. Co.	145	—
Watts Mills, 1st pfd.	—	75
Watts Mills, 2d pfd.	82	90
Winget Yarn Mills Co.	65	71
Williamston Mills	200	—
Wiscassett Mills Co.	—	225
Woodside Cotton Mills	83	88
Woodruff Cotton Mills	153	163

Spartan Sizing Compound Co.
WITHERPSOON & WITHERSPOON, SPARTANBURG, S. C.
Manufacturers of
Spartan Compounds,
Tallows and Gums

Established 1896 Incorporated 1914
LOWELL SHUTTLE COMPANY
Manufacturers of
BOBBINS SPOOLS SHUTTLES
Write or Telegraph for Quotations
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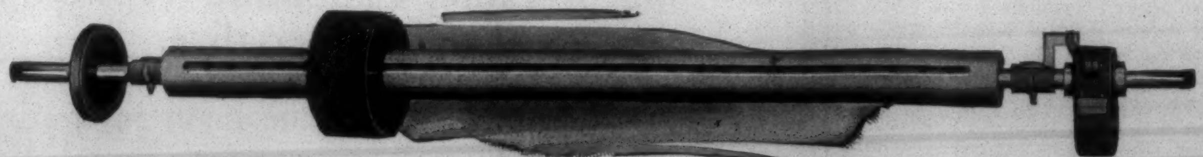
Textile Grinding Machinery Of All Kinds



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Loom Fixer to Overseer.

(Continued from Page 9)

prevail even if the texture is subjected to hard usage.

Usually the tire manufacturers order the leno fabrics 60 inches wide and to weigh 17 ounces for one yard of this width. The details of the lay out of the warp and filling, the construction of the whip and ground threads, number of ends of warp, picks per inch, drawing-in draft, harness chain, number of reed, the kind of looms used and other necessary information for the production of tire breaker strips will be given in the next article of this series.

(Continued)

(Concluded Next Week)

Korean Market for Cotton Goods.

(Commerce Reports.)

Chosen (Korea) imports of cotton goods during the first eleven months of 1921 amounted to $17,000,000, as reported by Consul General Miller, comparing favorably with the figures for 1918, 1919 and 1920, when $15,000,000, $35,000,000, and $15,500,000 were the values. White cotton is the staple dress of 17,5000,000 of the Korean people. The market is supplied chiefly from Japan. The United Kingdom also maintains a respectable trade, but Americans have not broken into the trade to any great extent.

Semi-Annual Survey of European Cotton Industries Available.

(Commerce Reports.)

Surveys of the cotton industries of Great Britain, Germany, Belgium, Spain, Portugal, France, Czechoslovakia, Italy, Poland, and Austria have recently been forwarded to the Textile Division by representatives of the Department of Commerce stationed in European mill centers. Information as to activity, wages, consumption of raw cotton, production, export markets, etc., are discussed in detail. Some of these surveys have already been printed and are available for distribution on application to the Textile Division.

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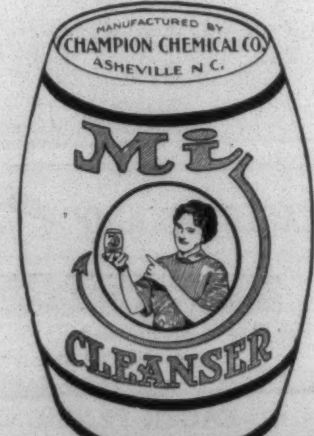

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Asheville, N. C.

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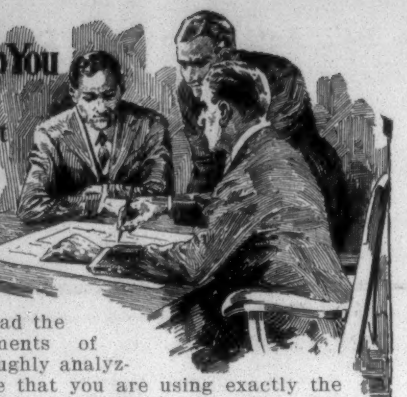

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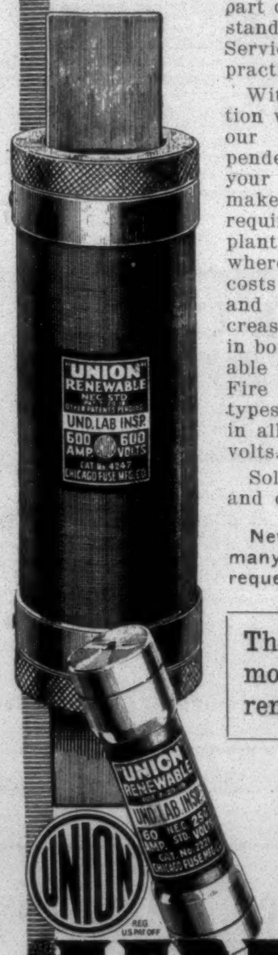

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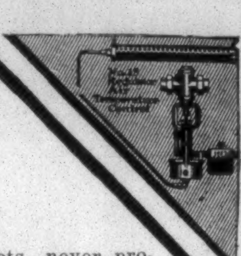

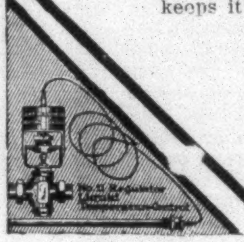

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U. S. Ring Travelers are **uniformly tempered** which insures even-running spinning. They are also correct as to **weight** and **circles.** Quality guaranteed.

Discusses Foreign Textile Situation.

Worcester, Mass.—The textile situation in England, France, Switzerland and Italy was reviewed by John F. Tinsley, general manager of the Crompton & Knowles Loom Works, in a talk before the members of the Manufacturers' Textile Association, at its monthly meeting in the Bancroft Hotel.

"There is a very large textile business in Alsace, both in worsted and cotton, and the addition of this territory to France will put France among the leading textile countries of the world," said Mr. Tinsley. "Eighty per cent of the worsted looms of France were in the enemy occupied country during the war. Many of the mills were not damaged.

"Practically all materials on looms that could be used for munitions were taken by the Germans. Some of the great textile mills in Northern France, especially in the sections of Lille and Roubaix were used for stabling horses and housing military automobiles. Some were operated, others were not.

"A very active inventory was taken of all damage done to the mills and it is the intention of France to see that the owners are reimbursed. The foreign trade in textiles in France was all lost during the war. rance is looking today to get this trade back.

"At the present time there is little likelihood of American textile machinery being sent to Europe on account of the unfavorable exchange situation and also because the financial arrangements upset by the war are not yet restored.

"Europeans generally speaking are turning to the problem of reconstruction vigorously, and the situation seems to be much improved."

Mr. Tinsley recently returned from Europe, where he visited many of the textile mills for two months, thus giving him first hand information on the textile conditions in that country.

The meeting was attended by 40 members and guests. Charles A. Root, agent of the Uxbridge Worsted Company, Uxbridge, Mass., who is president of the association, was toastmaster. During the dinner an entertainment was provided by professional talent from Boston.

It was decided to hold the next meeting at the Uxbridge Inn, Uxbridge, on May 11. The annual outing will probably take place in June.

China Can Use Product of 10,000,000 Spindles.

Washington.—"Shanghai is destined to become the Manchester of the East," declares Commercial Attache Julien Arnold in a review of the cotton industry of China in the volume "Changes in the Economic Life of the Chinese People," just published by the Bureau of Foreign and Domestic Commerce.

Commenting on the fact that for many years the Chinese cotton manufacturing industry will not be able to supply internal needs, Mr. Arnold declares "the country can easily handle 10,000,000 spindles and 100,000 looms. In capital outlay 10,000,000 spindles are equivalent to $800,000,000 silver. It is going to require some years before so much capital is available for this purpose."

According to statistics quoted there are at the present time 2,000,000 spindles in operation in China in 83 mills, and an additional 1,000,000 spindles have been ordered. "Thus China's position in the modern textile industry is not one which need cause apprehension," Arnold comments.

A New "National" Dye.

The National Aniline & Chemical Company, Inc., announces the production of a new acid blue under the designation of National Wool Navy B.

This dye is especially recommended for the production of bright navy blues on ladies' dress goods with white cotton or artificial silk effects, and on knitting yarns, as it satisfies the light and washing requirements of these classes of material. It also possesses the excellent levelling properties of pre-war acid blues of this type, the company states.

Samples, together with dyeing accompanied by full working details, will be supplied by our nearest branch office.

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Pencil No. 174

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EAGLE MIKADO
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Fire Without Having A Cleaning Period O

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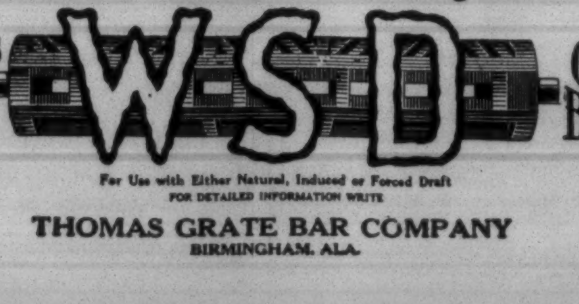

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For Use with Either Natural, Induced or Forced Draft
FOR DETAILED INFORMATION WRITE
THOMAS GRATE BAR COMPANY
BIRMINGHAM, ALA.

Need of Greater Fibre Knowledge.

(Continued from Page 3 ,)

method of imparting your ideas to the mill men for whom you are selecting the cotton.

"Every lot of cotton that is purchased should be studied first by careful pulling or stapling. Typical samples should then be mounted for microscopic examination, and, after these slides have been photographed and enlarged, the resultant microphotograph should be carefully examined for the purpose of detecting the presence of immature and overripe fibers and to see that the twist extends reasonably near to the base and the tip of the fiber. Extreme fiber length is of little value unless the tip has a reasonable amount of spirality—in fact, a long cotton with a tip deficient in spirality may produce a weaker yarn than a shorter cotton having spirality, or natural twist ,evenly distributed from tip to butt.

The cotton mill man who has both fiber and manufacturing knowledge is doubly armed. He is not only in a position to detect imperfections in yarns and fabrics due to machine and process faults, but he is able to trace to their source a very large number of yarn and fabric imperfections due to improper fiber selecton."

Lancashire Cotton Trade.

(Continued from page 7.)

spindles in operation. It must also be remembered that the Indian spinner is greatly handicapped in his initial outlay. Where before the war it cost at the rate of two guineas a spindle to put up mills in Great Britain, it cost the mill owner of Bombay four guineas, and the proportion today is unchanged. No doubt a great deal of the machinery now going out to India from this country was ordered before the war, but it will have to be paid for at the enhanced prices.

"It has been complained that Lancashire spinners and manufacturers have to contend also against longer hours and lower wages in the Indian mills," Sir Charles continued. "That is true, but things are not so bad as they appear. England has led the world in reducing hours of labor. Here and in America hours in the cotton industry have been reduced from 55½ to 48 a week, and the Continent is following the example. India has just reduced its hours from 72 to 60, and night work is to be abolished in Japan. The process will continue until there will be uniform hours of work throughout the world."

The reduction of 12 hours in the Indian mills, he stated, would go a long way toward counterbalancing the difference between the import and excise duties. Then, although the individual worker in the Indian mills gets much less than the Lancashire worker, he is not nearly so efficient. One Lancashire operative is probably equal to three Indians, so that really the wages bill is not as small in comparison as many people imagine.

"Altogether, then, prospects for the Lancashire cotton industry are not so bad as some people would have us believe," this cotton authority concluded. "There are many millions of people in India who have used very little clothing at all as yet, not to mention the possibilities of China, with its population of 500 millions, and a cotton industry with only about 2,000,000 spindles."

Piece Goods Trade in China Broadens.

According to advices received here from Trade Commissioner Lynn W. Meekins, of Shanghai, the feature of the opening of the Shanghai piece goods market last month, after the China New Year holidays, was the absence of speculative buying. A conservative journal published in Shanghai predicts for 1922 "a continuation of the present values, while advances are not improbable."

Four factors are important in estimating the trend of the market for cotton piece goods in China: First, the demand abroad for the three greatest groups of Chinese exports—silks, cereals and vegetable oils; second, silver exchange; third, stocks of imports in China; fourth, extraordinary conditions, such as military operations, famine and floods. Late reports from the leading trade centers seem to warrant an encouraging view of the outlook for the rest of the year.

Although export movements are still far below normal in most lines, the foreign demand for silk and for some kinds of vegetable oils is improving. In the middle of February silk prices at Shanghai were firm and the outlook good. Hankow reported firm quotations and a steady market for wood oil and prices of bean oil were higher than at the beginning of the month. Sesamum seed has advanced in price, with a fairly good demand.

Silver exchange dropped perceptibly between the middle of February and the middle of March, causing both Chinese importers and foreign buyers of Chinese exports to hold off somewhat; but there seems to be no particular reason for a further decline, and as one American dollar for two Chinese dollars is the normal rate of exchange the present basis is sound. If maintained it should lead to a general resumption of buying and selling in China.

The stocks of imported piece goods in Shanghai, Tientsin and other ports are not exceptionally heavy, considering the consuming capacity of the interior. Smaller quantities have been offered lately at the Shanghai auctions—a good sign. Tientsin reports activity in piece goods, but prices received in February were lower than expected.

From Hankow comes the best news; the Chinese there are optimistic. This, together with the improvement in the wood oil and sesamum seed markets and the current export movement of goat skins from Szechwan, indicates that the outlook in central and western China is much better.

The effect of the disastrous floods during the summer of 1921 in Anhwei, Kiangsu and Chekiang provinces upon the piece goods market has been depressing, just as the famine in north China was in 1920 and early in 1921.

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Extra Strength of Yarn — Reduced Cost of Spinning
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The Metallic Drawing Roll Company
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This Laminar Roving Can is Seamless—
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Has a strong, turned over top—
And it's made of Vul-Cot Fibre—as tough as horn.
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A PURO Cooler with its Sanitary Fountain is the logical dispenser of Pure Cool Drinking water.

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Start Easiest, Run Smoothest, Wear Longest!

PAWTUCKET SPINNING RING CO.
CENTRAL FALLS, R. I.

Gum Tragasol Agglutinates

the fibres of the yarn—cotton, woolen or worsted whichever it may be—and prevents waste of good materials by eliminating flyings.

Gum Tragasol is Cheaper

than either wool or cotton, therefore, its use is a distinct economy.

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Standard Size of the South

Mildew, bleach and dye troubles are unknown to mills using Sizol

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Sizings Softeners Finishings

S. C. Thomas and C. C. Clark, Spartanburg, S. C.

Cotton Goods

New York.—The market for cotton goods continued generally quiet during the week, with prices considerably unsettled. One of the most interesting features was the reduction in fine ginghams, on which prices for fall were marked down almost 20 per cent to meet competition on imported combed yarn goods. There has been some increase in the demand for coarser goods due to the enforced curtailment brought about by the New England strike, which now affects about 20,000 looms. Prices on cloths were less active during the week and showed some loss in price. The market for brown sheetings was steady, with an increase reported in foreign business. Inquiries for these goods for domestic use showed a considerable increase as the week ended, and sellers are hopeful that a large business will result this week.

Bleached goods continued quiet and have been sold on the basis of 9½ cents for 4-4, 64x64s, plain finished. Some colored cotton goods were easier in second hands, but most of the mills are busy on orders that they received some time ago. Some of the mills making leading lines of sheetings, sheets and pillow cases have withdrawn from the market, having sold their output for the next 60 days. Ginghams and novelty tissues and ratines continue the most popular wash good lines, while some printed wash specialties are selling well. The New England strike has curtailed production of cotton blankets and domets to such an extent that mills not suffering from labor troubles have withdrawn their lines because they have all of the business they can handle at the moment.

Print cloths are holding barely steady. The demand is light. The feature of recent bidding has been a tender from some buyers who want goods for July, August and September. Mills will not go beyond July in any case, so far as can be learned, and will not sell at current prices for contracts. On spot levels a few mills will consider offers from a few customers.

There were some sales of 38½-inch 64x60s for April delivery at 7¼c and bids of 7⅜c for spots from the same sellers were not accepted on the ground that no spots were in hand. Sales of 68x72s were made at 8¼c. There were some narrow constructions sold and the price basis is said to have been 4¾c for 9-yards.

Sheetings for home trade were quiet. The bids made Friday were for goods deliverable forward from June and were turned down by most agents. Some mills would sell July goods on a basis of 8c for 37-inch 4-yard 48 squares. There have been several small sales made for shipment to China and other countries this week, few of them totalling over 500 bales.

There were inquiries in the market for pajama checks deliverable in the late summer months. One buyer would pay 8¾c for 72-80s and declined a mill offer of 9c for July. Some agents look upon these bids as speculative while others know that they have come from desirable customers who seem to think current prices are attractive.

During the week, there has been a brisk demand for second quality goods and the market has been pretty well cleaned up.

Curtailment of production is more talked of now in fine goods circles than either sales or prices. Further business was done in 65 and 70 warp goods in combed yarn plain weaves for extended delivery for special uses.

Agents and manufacturers are surprised at the maintained strength of cotton. They would naturally expect that it would fall off in price in view of the strikes in New England, threatened troubles in England and other unsettling factors. But cotton is held firm and some men are constantly expressing a changed viewpoint. They think that 15c to 18c cotton may not be dear cotton at all in the present state of the world's debts an dtaxes and finances generally.

Prices were quoted as follows:

Print cloths, 28-in., 64x64s....	6½
Print cloths, 28-in., 64x60s...	6¼
Print cloths, 27-in., 64x60s...	6
Gray goods, 38½-in., 64x64s..	7¾
Gray goods, 39-in., 68x72s....	8½
Gray goods, 39-in., 80x80s....	10¼
Brown sheetings, 3-yard....	10½
Brown sheetings, 4-yard.....	9½
Brown sheetings, Southern standard	11½
Tickings, 8-ounce	25
Denims, 2.20	17
Staple ginghams	16½
Dress ginghams	20a22½
Standard prints	11
Kid finished cambrics......	88½9½

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GREENVILLE, S. C.

The Yarn Market

Philadelphia, Pa.—The trade here reported a somewhat larger volume of yarn business during the week, fair sized sales being made at the lower prices. Prices showed a wide variation and a good many sales were made at prices that spinners will not consider. Some mills are selling stock yarns and taking orders to keep their plants busy at prices that are considerably lower than the general market level. Buying was scattered and covered yarn to be used for a variety of purposes, there being no steady business from any class of consumers. Some knitters bought fairly large quantities at 29 cents for 12s because they regarded these prices as good values. Curtain manufacturers and the insulating trades were in the market during the week and bought several moderate lots. Insulators continue to come in for small lots for prompt shipment, covering only what they need at the moment. Business in weaving yarns, as a whole, was rather small, although some sales were made at rather low prices.

Competition for any yarn business is very keen, and as a result, there has been little profit for the spinners and the sales that were made. Yarn users are watching the market for closely for any spot lots that can be bought cheaply and are showing no disposition whatever to anticipate future needs.

Carded yarns continued in a somewhat better position than combed yarns, the market for the latter being decidedly dull. Curtailment is reported as increasing among both Eastern and Southern mills. Prices are very irregular, quotations in many cases being purely nominal. Conditions in the yarn trade for the past few weeks have been so unsatisfactory that it is practically impossible to quote prices that represent the market. Little confidence is placed in published quotations, either by buyers or sellers, and where sales are made the prices are far out of line with those that might be made on the yarns in other hands.

The following quotations are in line with the general list as published in this market:

Southern Two-Ply Chain Warps, Etc.

10s	39 @--	2-ply 26s	33½ @--
12s to 14s	31 @--	2-ply 30s	35 @36
2-ply 16s	31½ @--	2-ply 40s	50 @--
2-ply 20s	32 @--	2-ply 40s ex	58 @60
2-ply 24s	33 @--	2-ply 50s	70 @72

Southern Two-Ply Skeins

5s to 10s	28 @--	36s	45 @--
10s to 12s	28½ @29	40s	48 @55
14s	30 @--	50s	70 @73
16s	30½ @31	60s	85 @--
20s	31 @31½		
24s	32 @--	Carpet—	
26s	33 @--	8s, 3, 4 and	
30s	34½ @35	5-ply	22 @23

Duck Yarns

3, 4 and 5-ply—		3, 4 and 5-ply—	
8s	29 @--	16s	31 @--
10s	29½ @--	20s	32 @--

Southern Single Chain Warps.

6s to 10s	29 @--	22s	32½ @--
12s	30½ @--	24s	33 @--
14s	31 @--	26s	34 @--
16s	31 @--	30s	36 @--
20s	32 @--	40s	50 @--

Southern Single Skeins.

6s to 8s	29 @--	20s	31½ @--
10s	29½ @--	22s	32½ @--
[illegible]	30 @--	24s	33 @--
14s	30½ @--	26s	33½ @--
16s	31¼ @--	30s	36 @--

Southern Frame Cones.

8s	28 @--	22s	32½ @--
10s	28½ @--	24s	33 @--
12s	29 @--	26s	33½ @--
14s	30 @31	30s	34 @--
16s	31 @--	30s extra	41 @--
18s	31½ @--	40s	52 @--
20s	32 @--		

Southern Combed Peeler Skeins, Etc.

2-ply 30s	57 @--	2-ply 60s	82 @--
2-ply 36s	62 @--	2-ply 70s	90 @--
2-ply 40s	68 @70	2-ply 80s	1 10 @--
2-ply 50s	72 @--		

Combed Peeler Cones.

10s	46 @--	28s	54¼ @--
12s	46½ @--	30s	57½ @--
14s	47 @--	32s	60 @--
16s	47½ @--	34s	61 @--
18s	48¼ @--	36s	62 @--
20s	49¼ @--	40s	68 @--
22s	50½ @--	50s	85 @--
24s	51¼ @--	60s	95 @--
26s	52½ @--		

Eastern Carded Peeler Thread Twist Skeins.

20s 2-ply	40 @--	36s 2-ply	52 @--
22s 2-ply	42 @--	40s 2-ply	57 @--
24s 2-ply	45 @--	45s 2-ply	62 @--
30s 2-ply	48 @--	50s 2-ply	75 @78

Edward H. Jacobs Dead.

The E. H. Jacobs Manufacturing Company, of Danielson, Co., is sending out the following announcement:

"It is with deep sorrow that we Hill Jacobs, in his 75th year, on Monday, March 27th."
record the death of the founder and president of this business. Edward

Although Mr. Jacobs retired from active business nearly fifteen years ago, he always mantained a close and genuine interest in the important industry of canvas loom supplies, in which he was a pioneer inventor.

Alsace Mills.

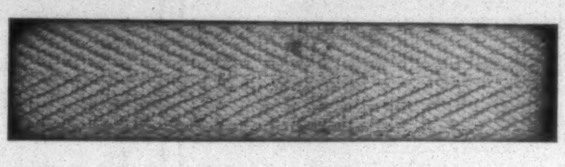
Mount Holly, N. C.

R. E. Starnes	Supt.
D. E. Mahaffey	Asst. Supt.
T. L. Hand	Carder
C. C. Hope	Spinner
E. W. Hand	Master Mechanic

Paulson, Linkroum & Co., Inc.
52 Leonard Street, NEW YORK CITY, U. S. A.
Philadelphia Providence Chicago Charlotte
COTTON YARNS
OF EVERY DESCRIPTION FOR
WEAVING AND KNITTING
We Specialize In Cotton Yarn For Export

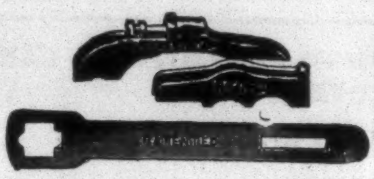
D. H. Mauney, Pres. Phil S. Steel, Vice-Pres. Jno. J. George, 2nd V.-Pres.
J. S. P. Carpenter, Treasurer D. A. Rudisill, Secretary
Mauney-Steel Company
COTTON YARNS
DIRECT FROM SPINNERS TO CONSUMER
237 Chestnut Street Philadelphia, Pa.
Eastern Office, 336 Grosverner Bldg., Providence, R. I.
Southern Office: Cherryville, N. C.
MILLS DESIRING DIRECT REPRESENTATION AND HAVE THEIR PRODUCT SOLD UNDER THEIR OWN MILL NAME WILL PLEASE COMMUNICATE.

AMERICAN TEXTILE BANDING CO., Inc
Manufacturer
Spindle Tape
AND
Bandings



Bolfield Ave. and Wister St., Germantown, Phila., Pa.

DIXON LUBRICATING SADDLE CO
BRISTOL, RHODE ISLAND



Use Dixon Patent Stirrup Adjusting Saddles, the latest invention in Saddles for Top Rolls of Spinning Machines. Manufacturers of all kinds of Saddles, Stirrups and Levers.
WRITE FOR SAMPLE

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WHITINSVILLE, MASS.
SPINNING RING SPECIALISTS SINCE 1873

HYDROSULPHITES
Bisulphite of Soda-Powder
Send Us a Trial Order
Sample Card and Lowest Quotations on Request
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Veneer Packing Cases
are lighter and stronger

Here are perfect 3-ply Veneer Packing Case Shooks. Their extreme lightness saves 20 to 80 lbs. in freight on every case shipped. They are stronger than inch boards, burglar proof, *waterproof* and clean —no cracks for dirt to sift through.

Write For Prices and Samples
Our Prices are Convincing
Our Service is Quick

Wilts Veneer Co., Richmond, Va.

COMPLETE DYEHOUSE EQUIPMENT
Special Machinery for Textile Mills
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Bethayres, Pa.

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Spools
Skewers
Binders
Loom Supplies

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National Ring Traveler Company
Providence, R. I.

C. D. TAYLOR, Gaffney, S. C. C. D. PEASELEY, Charlotte, N. C.
SOUTHERN REPRESENTATIVES:

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200 Warper Beams, 26-in. Head, 9-in. Barrel, 54¼-in. Between Heads. Made by T. C. Entwistle & Co. Used only short while. Will make attractive price.

ROANOKE MILLS CO.,
Roanoke Rapids, N. C.

MACHINERY FOR SALE

2	New Sash Cord Braiders.
3	10-Spindle Lazenby Cop Winders.
1	40-in. Lowell Folder.
1	2,400 End Double Linker Denn Warper.
10,000	6-in. by 6-in. Spools.
10,000	Intermediate Bobbins for 9x4½ Whitin Frame, New.
15,000	7-in. by 3½-in. Lowell or Woonsocket Speeder Bobbins, New.
80	Section Beams, 26-in. Heads.
	All sizes of Pulleys and Hangers. Also Shafting.
10	Whitin Combers.

Will sell the above listed cheap. Want to buy one four by six Spooler. One Foster Cone Winder.

Pitts Cotton Manufacturing Company
Elberton, Ga.

We have recently issued an interesting and well illustrated book entitled:

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a copy of which will be sent you upon request.

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GARLAND MFG. CO.
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"Warp Dressing Service Improves Weaving"

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Linking Warpers Linkers Balling Warpers Balling Attachments Section Beam Warpers Long Chain Beamers Short Chain Beamers Warp Splitting Machines Warp Dyeing Machines Warp Doublers and Splitters Warp Coilers Boiling Out Boxes and Warp Washing Machines Dye House Ballers.

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Charlotte, N. C.

EMPLOYMENT BUREAU

The fee for joining our employment bureau for three months is $2.00 which will also cover the cost of carrying a small advertisement for one month.

If the applicant is a subscriber to the Southern Textile Bulletin and his subscription is paid up to the date of his joining the employment bureau the above fee is only $1.00.

During the three months' membership we send the applicant notices of all vacancies in the position which he desires.

We do not guarantee to place every man who joins our employment bureau, but we do give them the best service of any employment bureau connected with the Southern Textile Industry.

WANT position as superintendent of small mill, or carder and spinner. Practical man of 23 years' experience. Now assistant superintendent. Have been superintendent of both yarn and cloth mill and can give gilt-edged references. Address No. 3438.

WANT position as carder or spinner, or master mechanic. Now employed as mechanic, but have had 19 years in carding and spinning and can handle either room in first class manner. Good references. No. 3439.

WANT position as superintendent. Have had similar position in some of the best mills in the South and my long experience and success in the mill fits me to handle plant on either yarns or goods. Fine references. Address No. 3440.

WANT position as cloth room overseer. Now running cloth room for mill on ducks, drills and sheetings, tire fabrics. Giving satisfaction but want better paying place. Good references. Address No. 3441.

WANT position as superintendent. More than 20 years as superintendent and overseer and am high class man in every respect. Long record of satisfactory service. Address No. 3442.

WANT position as master mechanic. Now employed in electric drive mill, but am also familiar with steam drive and am expert in machine shop work. Satisfactory references as to character and ability. Address No. 3443.

WANT position as roller coverer. Five years experience in good shops. Can come on short notice. Prefer mill shop. Address No. 3444.

WANT position as overseer weaving. Long experience and can get results. Good references. Address No. 3446.

WANT position as superintendent. Have been superintendent over 15 years and have handled all classes of work. Competent and excellent manager of help. References. Address No. 3447.

WANT position as superintendent. Experienced reliable man who is now superintendent of large mill, but who wishes to change for excellent reasons. Address No. 3448.

WANT position as master mechanic or engineer. Experienced on both steam and electric drive, 8 years experience. Married, settled habits. Address No. 3449.

WANT position as superintendent of hosiery yarn mill. Have held such a position in several good mills. Now employed as overseer of card twisting and weaving in large mill. Would consider overseers' job at $150 or more per month. Have had excellent experience in every mill department. Address No. 3450.

WANT position as superintendent. Now employed as general superintendent of two mills, but have good reasons for wanting to change. Would like to get in touch with some mill needing man who can get quality and quantity production. Address No. 4451.

WANT position as superintendent. Can furnish references as to character and ability. Address No. 3453.

WANT position as manager or superintendent in the Carolinas or Georgia. Am high class man who would not consider less than $4,000 per year. I am not looking for a "good job" but wish to correspond with some mill that is not getting results and needs a first class manager. Address No. 3453.

WANT position as overseer of carding. My references are ample proof of my experience, character and ability to get results. Correspondence solicited. Address No. 3454.

WANT position as carder or spinner, or both in small mill. Have handled Nos. from 3s to 60s white and colored. Age 45, married. Best of references. Address No. 3455.

WANT position as overseer spinning, or would take second hand's place in large room. Have had 20 years experience in spinning, 5 years as overseer spinning and twisting. Can come on short notice. Good references. Address No. 3456.

WANT position as carder, or spinner, or both, thoroughly experienced in both departments. Now employed but can change on short notice. Address No., 3457.

WANT position as superintendent of hosiery mill. Thoroughly familiar with all phases of hosiery manufacture and can get excellent results. Good references. Address No. 3458.

WANT position as carder, or spinner, or both. Now giving satisfaction in good mill, but want a larger job. Experienced, sober and reliable. Address No. 3459.

WANT position as carder or spinner, or superintendent of small mill. High class man who can get real results. Now employed but will change for larger place. Address No. 3460.

WANT position as superintendent or overseer carding and spinning in large mill. Long experience, competent and reliable. References. Address No. 3461.

WANT position as superintendent or overseer spinning. Experienced man who has always given satisfaction over long period of years. Address No. 3462.

WANT position as master mechanic and chief engineer. Would like to connect with group of mills needing high class man. Familiar with both steam and electric drive. Address No. 3463.

WANT position as overseer of large card room, white or colored work. First class man in every particular and can furnish excellent references. Address No. 3464.

WANT position as superintendent of yarn mill, hosiery yarns preferred. Would like run down mill to pull out of hole. Age 48, married, long experience. Address No. 3465.

WANT position as overseer weaving, 25 years experience in weaving rooms, both white and colored work, such as sheetings, jeans, canton flannels, chambrays, denims, tickings, sateens, shirtings, plaids and terry towels. Experienced on plain, Draper and Crompton & Knowles box looms, including magazines. Good references. Will go anywhere. Address No. 3466.

WANT position as overseer of spinning. Age 31, long experience. Will go anywhere to get good place. Address No. 3467.

WANT position as master mechanic and engineer. Training and experience qualifies me to handle work in competent manner. Especially good with electric plants. Good references. Address No. 3468.

WANT position as superintendent or overseer of carding or spinning in large mill. My references show long period of good service, good character and steady worker. Address No. 3469.

WANT position as superintendent or overseer spinning. Now employed and giving satisfaction, but want larger place. References furnished to show my experience and record. Address No. 3470.

WANT position as overseer of carding, or would take second hand's place in large mill. Age 35; 25 years experience; now employed as overseer but wish to change. Married and settled, good references. Address No. 3471.

WANT position as superintendent, carder or spinner. Now employed as overseer in large mill. Over 15 years experience as superintendent and overseer. Good references. Address No. 3472.

WANT position as overseer weaving, or second hand. Over 15 years in weaving, experience as fixer, second hand and overseer. I. C. S. training, can handle prints, drills, chambrays, sheetings, denims, etc. Best of references. Address No. 3473.

WANT position as overseer of spinning. Now employed as overseer, but have good reason for wanting to change. Long experience in spinning, can handle long or short staple cotton. Prefer mill in Georgia, but would consider place in South Carolina or Alabama. Excellent references. Address No. 3474.

WANT position as superintendent of yarn or cloth mill, or would take large card room in good mill. Now employed as superintendent and have been superintendent and overseer for 25 years. Excellent reasons for making a change. Fine references. Address No. 3475.

WANT position as superintendent of large yarn or cloth mill, or manager of smaller mill. Have a long record of efficient and successful service. Special experience in bleaching. Can furnish excellent references from a number of very successful mill officers under whom I have been employed. Address No. 3476.

WANT position as master mechanic. Am 39 years old and have had 20 years experience in mill machine work and engine rooms. Thoroughly competent man in every respect. Good references. Address No. 3477.

WANT position as superintendent, overseer of spinning or weaving. Can show my qualifications for either of abvoe jobs if given an opportunity. Settled man of good habits. Address No. 3478.

WANT position as general superintendent, or agent for cotton yarn mill or plain cloth mill. Have been mill superintendent and manager for a long term of years and solicit correspondence with strong company needing a high class man to operate its plant on efficient and economical basis. A-1 references. Address No. 3479.

WANT position as overseer of weaving. Now giving satisfaction as weaver but want a larger place. References to show ability, character and experience. Address No. 3480.

WANT position as superintendent. Experienced on both plain and fancy goods and can give excellent references. Address No. 3481.

WANT position as superintendent or overseer of spinning. Now have charge of spinning in large plant, but have good reasons for wishing to change. Would like opportunity to submit my references. Address No. 3482.

WANT position as superintendent of yarn, cordage, or weave mill on white goods. Now employed as superintendent and have been on this job for the past 12 years. Good references as to character and ability. Address No. 3483.

WANT position as overseer spinning, spooling and warping, or would take second hand's place in large mill. Age 36, married, good manager of help. 20 years in spinning rooms, references as to character and ability. Address No. 3484.

WANT position as overseer of carding. Have had long experience in a nmber of good mills and can handle a card room in first class manner. Address No. 3485.

WANT position as superintendent or overseer of large carding or spinning room. Have been superintendent for last 12 years, long experience as overseer. Excellent references. Address No. 3486.

WANT position as superintendent or assistant superintendent, or carder or spinner in large mill. Have held present job as carder for 10 years and have charge of 2 card rooms. Will go anywhere for the right job. Fine references. Address No. 3487.

WANT position as superintendent of small mill or assistant superintendnet in large mill. Have held present job as superintendent for many years and have given entire satisfaction. Excellent references. Address No. 3488.

WANT position as superintendent of small yarn mill, or overseer carding or spinning in large mill. Have had long practical experience and have completed textile course. Good references. Address No. 3489.

WANT position as overseer of carding. Now employed as second hand, but am capable of handling overseer's place. Practical man and I. C. S. graduate. Age 27. Married. Excellent references. Address No. 3490.

WANT position as superintendent. Now employed as such, but want larger job. Especially qualified for weaving mill on fine and fancy goods. Have successfully handled a number of large Southern mills. Fine references. Address No. 3491.

WANT position as superintendent of weave mill, or would take place as carder and spinner in large mill. With present company five years, last three as superintendent. Ten years as overseer carding and spinning. Address No. 3492.

WANT position as superintendent. Now employed as overseer with one of the largest mills in the South. Have been with same company for six years. By experience and training am qualified to handle superintendent's position. Can give best of references. Address No. 3493.

WANT position as carder or spinner or both. Now employed as overseer, but wish better place an dcan come on short notice. Excellent references as to experience, character and ability. Address No. 3494.

WANT position as master mechanic. Now employed. Long experience as master mechanic and engineer in good mills. Can handle either steam or electric drive. Good machine shop and repair man. Address No. 3495.

WANT position as overseer of carding. Competent, reliable man whose experience and training is reflected in ability to get results. Now employed. Good references. Address No. 3496.

WANT position as overseer of weaving. Experienced on both plain and fancy goods and all makes of looms used in South. Steady worker, good habits, good manager of help. Address No. 3497.

WANT position as master mechanic. Have had nine years experience as master mechanic, 20 years with steam and electric drive and mill machine work. Good references as to character and ability. Address No. 3497.

WANT position as overseer of spinning, or would take carding. Long experience in both departments and can give satisfactory references. Address No. 3498.

WANT position as overseer of cloth room. Have had over 30 years experience in some of the best mills in the South, and have handled practically every kind of goods made in Southern mills. Wish to correspond with mill needing thoroughly reliable man who can handle cloth room in efficient manner. References. Address No. 3500.

WANT position as master mechanic. Experienced, reliable man now employed, but wish a larger place. References to show long record of satisfactory service with a number of first class mills. Address No. 3501.

WANT position as engineer and machinist. Experienced on both electric and steam drive and am competent to handle machine shop and general repair work. Good references. Address No. 3502.

WANT position as superintendent of large yarn or cloth mill or manager of smaller mill. High class, efficient man with long experience as superintendent and manager and can get results. Excellent references. Address No. 3503.

WANT position as overseer of carding, or would take place as second hand in large room. Practical, experienced man of character and ability, good manager of help. Fine references. Address No. 3504.

WANT position as superintendent, or carder and spinner. Many years experience in all these positions in some of the best mills in the South. Excellent references. Address No. 3505.

WANT position as overseer of carding in small or medium sized mill, or second hand in large mill. Age 26; married; I. C. S. graduate; good references as to character and ability. Address No. 3506.

WANT position as overseer of weaving. Now employed in large mill and giving satisfaction, but have good reasons for wishing to change. Experience includes work on practically all goods made in the South. Good references. Address No. 3507.

WANT position as overseer of carding or spinning or both, or superintendent. Now employed as night spinning in large mlil and giving entire satisfaction, but wish day work. References from past and present employers. Address No. 3509.

WANT position as master mechanic and engineer. Have had 12 years experience in steam and electric driven plant and can handle either in competent manner. Good references. Address No. 3510.

WANT position as overseer of weaving in mill on plain or fancy goods. Now employed, but can change on short notice. Experience and training cover a long period of years in a number of good mills. Good references. Address No. 3511.

WANT position as overseer of weaving. Practical man of long experience who is fitted to handle your weave room on efficient and economical basis. Good references. Address No. 3512.

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Tripod Paint Co., 6° N. Broad St., Atlanta, Ga.

—U—

United Chemical Products Corp., York & Colgate Sts., Jersey City, N. J.
U. S. Ring Traveler Co., Providence, R. I.
Universal Winding Co., Boston, Mass.

—V—

Vogel Co., Jos. A., Wilmington, Del. Mass.

—W—

Wadsworth. Howland & Co.. Boston.
Ward-Davidson Co., 2525 N. Second St., Philadelphia, Pa.
Wolf & Co., Jacques, Passaic, N. J.
Wood's, T. B.. Sons Co,, Chambersburg, Pa.
Ridley Watts & Co., New York.
Winfield Bros., 25 Broad St., New York.
Wheeler Condenser & Engineering Co., Carteret, N. J.
Whitin Machine Works, Whitinsville, Mass.
Whitinsville Spinning Ring Co., Whitnsville, Mass.
Whitman & San, Clarence, New York.
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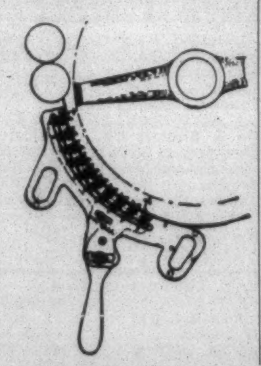

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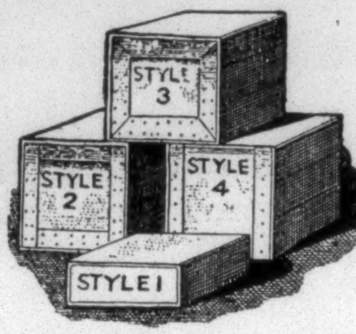

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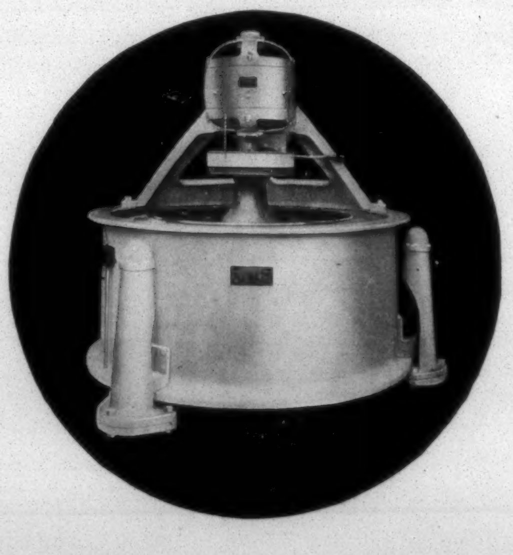

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